

*Kathryn Cooper*  
*Karen Sloss*

# A GUIDE TO DEVELOPMENTAL ASSESSMENTS FOR YOUNG CHILDREN

By  
Deborah Klein Walker, Ed. D.  
Martha Stone Wiske, M.A.

With the assistance of  
Gertrude Sadeghpour and Faith Hampshire

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# **A GUIDE TO DEVELOPMENTAL ASSESSMENTS FOR YOUNG CHILDREN**

**EARLY CHILDHOOD PROJECT  
DIVISION OF SPECIAL EDUCATION  
MASSACHUSETTS DEPARTMENT OF EDUCATION**



Dear Colleague:

This document represents the second in a series of Early Childhood publications to be developed by the Early Childhood Project, sponsored by the Massachusetts Department of Education, Division of Special Education and the Office of Special Education, U.S. Department of Education.

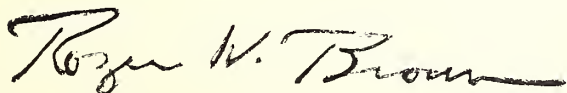
Chapter 766 of the Acts of 1972: **Massachusetts Comprehensive Special Education Law** and Public Law 94-142: **The Education for all Handicapped Children Act of 1975** require the identification and evaluation of all children with special needs.

The first publication in the series: **A Guide to Early Childhood Developmental Screening** was developed to assist local education agencies in the organization of a screening system and to offer guidance in the selection of appropriate instruments to use for screening of young children.

**A Guide to Developmental Assessments for Young Children** was developed to help public school personnel implement the assessment component of the law. The guide raises a broad range of questions which must be considered when determining assessment procedures for young children ages three to five, defines the decisions which must be made in design of the assessment process and identifies issues which should be considered.

We trust this guide will be of assistance in the assessment and delivery of services to young children with special needs.

Sincerely,

A handwritten signature in dark ink, appearing to read "Roger W. Brown". The signature is fluid and cursive, with a long horizontal stroke at the end.

Roger W. Brown  
Associate Commissioner

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# **I INTRODUCTION**

## **A. Overview and Purpose of Guide**

Developmental assessment is one component of a comprehensive program of services for children who have special needs. It is the step in the process which takes place between referral of children suspected of having delayed or abnormal development and the design of an appropriate intervention strategy for children identified as needing special assistance.

This guide is designed to help public school personnel implement the assessment component of the early intervention services mandated by P.L. 94-142 (The Education for all Handicapped children Act of 1975) and Chapter 766 of the Acts of 1972 (Massachusetts Comprehensive Special Education Law). It does not provide a complete list of suggestions for meeting these mandates, because experts differ in their recommendations and because solutions to assessment dilemmas must be tailored to particular situations. However, the guide raises the range of questions and answers which must be considered when designing assessment procedures for young children, ages three to five years. It is hoped that the guide will help both planners and practitioners to evaluate and improve existing assessment procedures by defining the key components of the assessment process, by describing issues and problems of assessment in young children, by reviewing the procedures and personnel which may be included in the

assessment process, and by listing resources which may provide technical assistance for implementing developmental assessment programs.

## **B. Components of the Early Intervention Process**

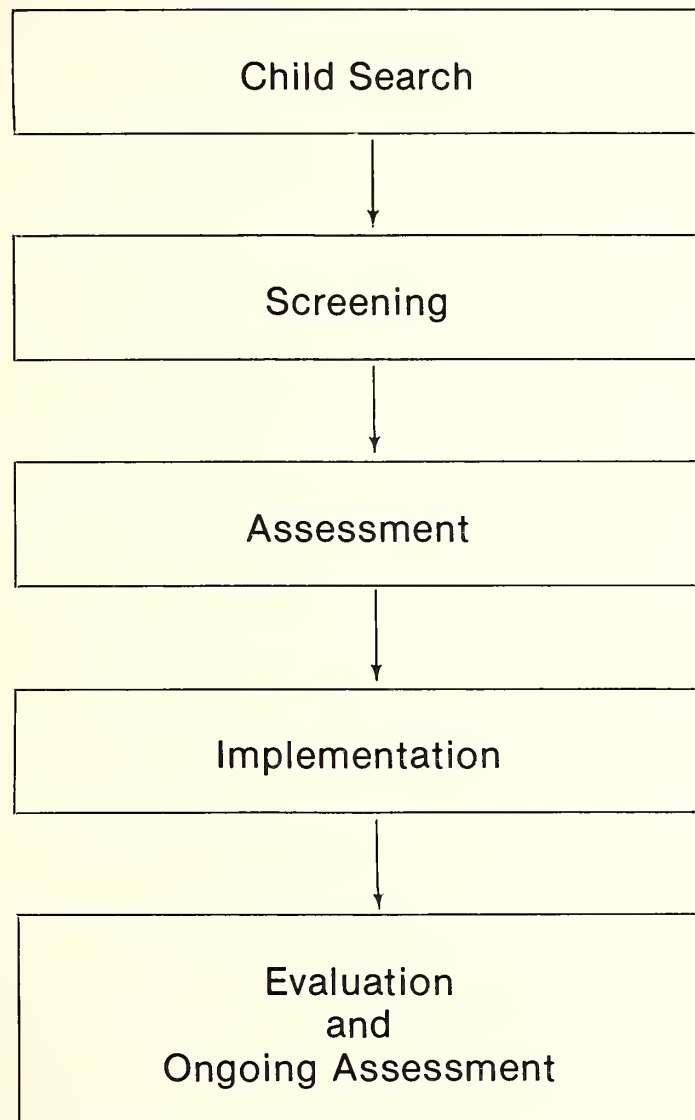
A comprehensive early intervention program is an attempt to identify and remediate special education needs in young children. This strategy is based on the assumption that early assistance for children with delayed or abnormal development will help them reach their full potential and will minimize the emotional overlay associated with repeated frustrations and failures. Figure 1 displays the five major components of an early intervention program.

### **Child Search**

The first step in an early intervention program is publicizing the availability of services and the importance of using them (see Section 304).<sup>1</sup> This information is directed toward all parents and professionals who deal with young children and includes information about normal development and indicators of abnormal or delayed development. The availability of programs and services including time, location, and cost is described in simple language which will encourage use of the services without fear of stigma. The attempt to identify young children in need of special education also requires that schools maintain contact with

**Figure 1**

**Components of the Early Intervention Process**



state agencies which provide special services to children under three years of age.

## **Screening**

Screening is a simple procedure, provided on a wide-scale basis in Massachusetts, to large numbers of children to identify those who may be in need of special services (see Sections 305.0 through 308.0). Screening includes a request of information from parents about the child's developmental background the current functioning. The child is then seen for medical, vision, hearing and developmental screening. The latter is a brief survey of the child's visual, auditory, motor and language abilities.

These services must be provided to all entering kindergarten children no later than October 31st of each year. Comparable services are to be made available to three and four year old children.

Screening programs are designed to provide a brief global picture rather than an intensive comprehensive assessment profile of the children who are screened. The screening process does not provide a definitive description of a child's needs. Rather it provides a means of identifying those children who should be referred for a fuller assessment because they are suspected of having special needs.<sup>2</sup>



## **Assessment**

The assessment component involves the gathering of further information from a variety of sources in order to produce a comprehensive picture of those children who are referred because they are thought to be in need of special services. The purpose of assessment are (1) to identify a child's specific areas of strengths and weaknesses, (2) to determine the nature of problems or deficiencies, and (3) to suggest cause, wherever possible, and (4) to make recommendations about suitable remediation services.<sup>3</sup> Thus, the assessment component includes making a diagnosis, if possible, and a functional assessment, which is a developmental profile that describes what a child can and cannot presently do.

Chapter 766 regulations specify the conditions under which an assessment must be provided for a child, and guidelines for the composition of the TEAM of specialists who will provide such assessments (see Sections 311.0 through 319.0) The results of this component, especially the functional assessment, are used to identify the areas requiring special education and related services and to write an individual educational plan. This guide focuses on this assessment component of an early intervention program.

## **Implementation**

Assessment information is synthesized to produce an individual educational plan for each child with special

educational needs. The plan includes general and specific objectives, personnel, and daily schedules involved in the child's education. Implementation is the development of this plan and the provision of appropriate services. For three and four year old children the educational plan must have a curriculum based on developmental sequences of growth, must involve the family in its implementation, and must be coordinated with other services being provided to the child (see Section 502.8).

## **Evaluation**

This step includes a review of services for each individual child who is receiving special services as well as for the total early intervention program. Each child's progress is reviewed at least semi-annually so that the individual education plan may be tailored to the child's changing strengths and weaknesses. A more extensive review of progress and revision of the educational plan for each child is required annually.

The assessment process must be repeated at least every three years for each child (see Sections 334.0 through 337.1).

Evaluation of the entire early childhood program includes a periodic review of the goals and procedures of each component. Community needs and resources should be analyzed to determine whether current use of personnel, procedures, and material resources is efficient and effective in providing services to young children.

## **C. Assumptions**

This guide is written with a number of assumptions in mind. Understanding of these assumptions is a prerequisite for interpretation of its contents in a manner which is consistent with the authors' intentions.

### **Young Children Are Different**

The assessment of young children differs markedly from the assessment of older children. These differences, which will be described in more detail in a later section, exist for several reasons. Young children are developing at a more rapid pace than older children. Because of their inexperience young children are often unpredictable or uncooperative during assessment procedures. Issues of availability and communication are different for many since they are not already enrolled in school. Because young children may not be attending public school, making contact with their parents and the agencies which serve them requires extra effort. The content and process of the educational assessment component defined for older children must be modified for young children. Finally, the assessment instruments are often different to reflect the unique characteristics of this age group. All of these factors dictate that assessment procedures must be adapted and personnel must be specially trained in order to provide appropriate services for young children.



## **Parents Are Important**

Assessment involves the collection and synthesis of information readily available from those who are familiar with the child as well as the generation of new information from early childhood professional experts. The parents are the most important source of information about the child's history and current pattern of abilities and difficulties. In all cases, particularly with young children, parents will be an important element in the intervention process. In order that the remediation procedures be appropriate and feasible, parents must be included in all phases of the assessment process.

## **Competence Is Relative**

Assessment depends upon definitions of normal development and acceptable levels of competence or functioning, which are relative in many instances. These perspectives on competence are influenced, among other things, by ethnic, linguistic, and socioeconomic background. When parents and professionals differ on these dimensions their definitions and observations of competence are likely to differ. Valid assessment must take the child's ethnic, linguistic, socioeconomic background and other factors into account.

Training and experience also influence definitions of competence as well as methods of assessing it. Thus, the results of the assessment process are more likely to

accurately reflect the whole child when the assessment process includes the participation and collaboration of a variety of assessors from different disciplines and perspectives.

Finally, children demonstrate competence differently depending on the setting and circumstances. For this reason assessment should include observation as well as standardized tests and exams, and should take place in a variety of settings, including realistic environments. Assessments made in the home and/or in the child's classroom are often the most reliable and revealing.

## **Process Mirrors Content**

The ultimate goal of educational assessment is to facilitate the most effective use of available resources so that a child may be helped to reach his or her full developmental potential. The **process** of the assessment should further this goal just as the final product of assessment — the individual educational plan — advances this aim. For instance, the process of assessment should foster collaboration and communication among parents, school personnel, and other professionals familiar with the child. In this way the assessment begins a process of sharing and increasing skills and knowledge which is the necessary foundation for the child's successful educational experience. Procedures which increase confusion, fear, or detrimental labeling do not promote the goals of early intervention.

## **D. Legal Mandates**

There are several federal and state statutes which regulate the provision of special services for young children. These laws create enclaves of funds and trained personnel within educational, medical and social service agencies. In order to meet these legal requirements in an effective manner these agencies should communicate and collaborate with one another.

### **Public Law 94-142**

The Education for All Handicapped Children Acts of 1975 (P.L. 94-142) requires the identification, assessment, and appropriate education of all children between the ages of six and twenty-one who have special educational needs. Similar services for children from birth to six years old are permissive under federal law. State law supersedes the federal mandate for children in this age range. The services which are required by P.L. 94-142 are very similar to the Massachusetts state law in their intent but are less specific with regard to many of the regulations.

### **Chapter 776**

The Massachusetts Comprehensive Special Education Law, (Chapter 766) includes detailed regulations about the screening, assessment, and intervention services which

must be provided for children from age three to twenty-one. All kindergarten children must participate in an extensive early screening process before entering school (specifically by October 31 of the kindergarten entry year). Screening includes vision, hearing and developmental screening and a thorough medical examination. These same services must be publicized and made available to three- and four-year-old children and they are encouraged but not required to participate. Chapter 766 (see Section 304.8) requires that a Massachusetts Human Services Agency which is providing special services to a child under the age of three must notify that child's school district around the time of the child's second or third birthday. The school can then plan to provide the necessary evaluation and intervention services.

There are specific requirements in the law concerning publicity, solicitation from parents, and parents' access to information prior to and following all aspects of special education assessment and intervention procedures. The law describes the conditions under which a child may be referred for special educational assessment and the people who may make such referrals. Criteria for determining the components in the assessments procedure are also regulated.<sup>4</sup>

According to Chapter 776, the personnel who participate in educational assessments of three- and four-year-old children and kindergarten children should have "experience or training" in working with children of that particular age



group. It also specifies that the procedures described for school age children are to be appropriately adapted for younger children not yet enrolled in school.

## **Head Start**

The Head Start Economic Opportunity and Community Partnership Act of 1974 requires that no fewer than ten percent of enrollment opportunities in Head Start be made available to handicapped children. Although there is considerable variation among Head Start centers, many of them have access to serve young children with special needs. Differing funding and certification requirements can confound the best efforts to promote interagency cooperation. However, some Head Start centers and public schools have collaborated imaginatively to coordinate the provision of services to young handicapped children. To encourage further collaboration the Massachusetts Department of Education and Head Start have signed (1980) a joint letter of agreement to foster and facilitate cooperative efforts in providing integrated placements for three and four year old children with special needs.

## **Title I**

Title I of the Elementary and Secondary Education Act (ESEA) is the largest federal program of assistance to education systems. The purpose of Title I is to provide special compensatory education to educationally-deprived children, including those in institutions for neglected or delinquent children and in state schools for handicapped children.

The Title I funding for state-operated programs for handicapped children which was created by amendments to ESEA in November, 1965 (P.L. 89-313), provides grants for the special education of two groups of children: (1) handicapped children in state-operated or supported schools and (2) handicapped children formerly in state schools who have transferred to an appropriately designed program in local schools.

## **Day Care Regulations**

State Day Care regulations specify conditions under which day care centers can be licensed to serve children with special needs. Licensed day care centers can be a valuable resource for public school systems in need of placement facilities for young children.

### **E. Issues in Assessing Young Children<sup>4</sup>**

Assessment procedures for young children must be different from those used for school age children. This section describes these modifications and the reasons for them.

The rate of development in young children is usually very rapid. Consequently, assessments are at best the basis for tentative conclusions subject to frequent revisions. The rapid rate of development in young children means that a wide-range of behaviors may be considered normal for a given

age. The personnel who assess young children should be well trained and experienced in order to distinguish normal immaturity from abnormal or delayed development.

Young children are more likely to resist assessment procedures or to give erroneous impressions. They frequently lack experience with strangers and with the assessment situation. Their attention span is not as long as for older children. Furthermore they are more influenced by recent events and more subject to fear, shyness, or fatigue. For these reasons **several assessment sessions** are preferable to one long session. The assessor must be able to establish and maintain rapport and to recognize when it is absent and the results are no longer valid.

Many young children — especially three- and four-year-olds — have not previously been enrolled in an educational setting. If a child's suspected problem is related to academic development and/or behavior in groups, the assessment should include observations made in a classroom setting. In these cases, an early childhood diagnostic classroom is an important component in the assessment program (see Section 502.9).

Because the young child usually spends so much time in the home, family involvement in the assessment process is crucial. This point, which cannot be overstressed, will be made throughout the guide.

Assessment technology for young children is not yet well developed. Because there are relatively few well validated formal assessment instruments, informal assessment



procedures take on special importance for young children. A careful orchestration of various points of view and types of assessment techniques in the assessment process will yield the best assessment picture of each child.

## **II. STEPS IN THE EARLY CHILDHOOD ASSESSMENT PROCESS**

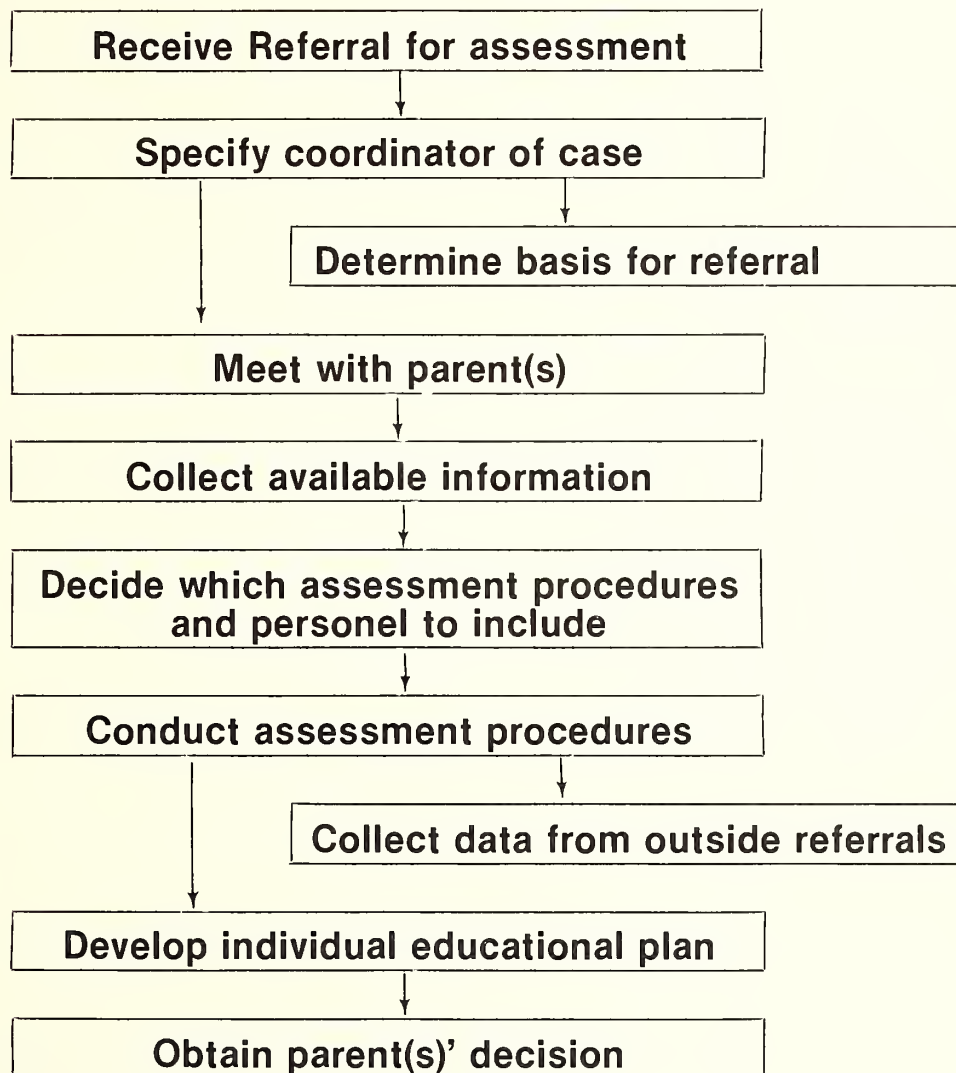
This section of the guide will describe the procedures and personnel involved in each step of the assessment process for young children.

Please see Figure 2 for an overview of the entire process.

### **Receive Referral for Assessment**

In each school system one person should be identified and publicized as being the appropriate person to whom referrals of young children are to be made. The identification of this liaison will simplify the referral process for parents and agencies who may not be familiar with public school procedures. In small systems, this person may be the director of special education services; in larger systems there may be one or more coordinators of services for pre-school children. Parents and professionals who work with young children must be informed about the appropriate means for referring to this person those children who may

**Figure 2**  
**STEPS IN THE EARLY CHILDHOOD**  
**ASSESSMENT PROCESS**



be in need of special services. A school official, parent, judicial officer, social worker, family physician, or person having custody of the child may make a referral (see Section 316.0). Kindergarten children who are at risk of non-promotion and/or who are frequently absent should be reviewed for referral to the assessment process (see Section 315.0).

## **Specify Coordinator Of Case**

When a child is referred for an assessment, a TEAM chairperson must be appointed (see Section 311.0). This case coordinator is responsible for facilitating communication among all people involved in the assessment and for scheduling meetings and procedures so that the process is accomplished within legal requirements. This person makes certain that parents are carefully informed and consulted throughout the assessment process. The team chairperson is appointed by the Director of Special Education Services (see Section 310.4). He or she should have extensive relevant assessment and educational program experience with young children. Ideally, a person familiar with preschoolers and community programs and resources for them should coordinate all preschool (ages three and four years) child cases and a person familiar with kindergarteners and the local school and community resources for them should coordinate these cases. In many school systems, this may be the same person. Under no circumstances should the school representative be a person familiar only with older children.

## **Determine the Basis for Referral**

Interview the person who makes the referral to learn the description of the problem, the basis for making the referral (e.g., screening results, observation, previous assessment results), the severity and duration of the problem, and the circumstances under which it occurs. Figure 3 gives an overview of the types of problems of children referred for assessment. The extent and complexity of this step, and of all subsequent ones, will depend on the nature of the referral problem. For example, the child who fails vision screening may require a simple notification of the parents and scheduling of a more thorough eye examination, while the child with a more complex referral problem involving several areas of concern, (see Figure 3) may require many more steps in the assessment process. For these complex cases, this interview step provides important sources of information for deciding the further course of the assessment process.

## **Meet with Parent(s)**

Parents are the most important source and recipients of information throughout the assessment process. Parents must be given the opportunity to meet with the TEAM chairperson (or designee) before the assessment process begins (see Section 318.0). Meetings with parents involve a two-way flow of information. The purpose of this meeting is to elicit from them their observations and concerns about the referral problems and other relevant information such as,



## **Figure 3**

### **Types of Problems of Children Referred for Assessment**

#### **A. Developmental Areas of Concern**

1. Language/speech
2. Learning problems/disabilities
3. Emotional/adjustment problems

#### **B. Physical and Health-Related Problems**

1. Orthopedic ailments
2. Health-related illnesses  
(e.g., cerebral palsy, spina-bifida,  
cystic, fibrosis, etc.)

#### **C. Sensory**

1. Vision
2. Hearing

brief history of the problem, description of previous evaluations, names of other professionals, e.g., pediatricians, teacher, who are currently working with the child. During this meeting the parents are also informed about the probable evaluation procedures and about their rights in the process (see Section 317.0). Parents must also be given this information in writing and their written permission must be obtained before requesting records about the child from other professionals or proceeding further with the assessment.

## **Collect Available Information**

Send for copies of assessments which have been completed previously. In addition to the referral source, interview other people familiar with the child. These should include the teacher of a program where the child is currently enrolled or has recently attended (see Section 307.3), the child's physician or nurse practitioners, and other specialists who have worked with the child.

## **Decide Which Assessment Procedures and Personnel To Include**

After the already available information about the child has been collected, the decision may be made, with the parents' consent, that no further evaluation is necessary. For



instance, a child who failed developmental screening may be described by parents and teacher as being capable but shy and slow to relate to strangers. If those who are familiar with the child are not concerned about his/her development, and if the parents do not request or give permission for an assessment, the child may be observed and the assessment postponed or foregone.

If further assessment is desired it must be decided what further steps will be taken. These decisions will depend upon the nature of the child's disabilities (see Figure 3). Often there will be one or two obvious procedures which must be done, but further decisions about the assessment will depend on the results of these first steps. Unless a serious neurological or medical difficulty is suspected or the child may be in danger, the assessment process may unfold gradually with each step providing the basis for deciding about further steps. The most cost-effective and practical steps, such as home visits, observations, interviews and record reviews, should be taken first and more elaborate procedures like standardized testing or evaluation by clinics reserved until they are deemed necessary.

## **Conduct Assessment Procedures**

This step involves making appointments for assessment procedures by the designated qualified personnel. If the assessment procedures are to be made by school personnel, this step may be relatively uncomplicated. Staff who are accustomed to working together usually have well articulated means for acquiring and sharing information efficiently and effectively. The forms (included in Appendix C) which are designed for out-of-school referrals may be modified for use among the various professionals within school settings.

Often one of the most valuable assessment procedures for young children is observation of their behavior in a classroom setting. The trained observer can note the child's abilities and behavior in a naturalistic setting. Many communities have found that an early childhood diagnostic classroom is extremely valuable for this purpose.

If the young child is enrolled in a day care or other classroom setting, observation (with parental consent) by a teacher or other early childhood specialist can be a valuable

source of information prior to referral or as the educational assessment component.

If some of the assessments are to be made by “outside agencies,” clinics or other resources which are not part of the school system, referrals need to be made with the parents’ consent. Under these circumstances the parent will need information about making appointments, transportation, and funding. The parent may also benefit from suggestions about how to ask questions and obtain information from the professionals to whom they are being referred.

In addition, the clinic to whom the referral is being made needs the background information on the child and a clear understanding of the reason for the referral. In order to be certain that the assessment will address the appropriate issues, prepare a list of these questions to which the school system needs answers, and of the agency or person to which the child is referred (see section 321.7).

## **Collect Data From Outside Referrals**

Data from any outside referrals made during the assessment process should be received in a form which is useful for understanding the nature and extent of a child’s problem as well as for writing an individual educational plan for the child. Many outside referral sources are busy and/or are not accustomed to providing practical educational

recommendations in place of or in addition to the diagnosis and test results. It is preferable therefore for the school system to request the needed information on a specific form which lists the key questions or areas of concern. Examples of forms and functional assessment questions are included in Appendix C.

## **Develop Individualized Educational Plan**

This step includes several components, the sequence of which will depend on individual circumstances. Assessment data must be reviewed and a determination made about whether it is adequate for the development of an education plan. If it is insufficient or inconclusive for this purpose, then further assessment procedures must be undertaken. All personnel who have participated in the assessment, including parents, will participate in developing the educational plan (see Section 311.0).

The educational plan includes a description of the child's performance level and learning style and the general and specific objectives which the child can be expected to achieve. The final step in the educational plan is to determine the methods and services necessary to implement the objectives of the plan. After determining these, a review of the available educational resources within the school system and community, including the home, must be made. Head Start and other nursery school or day care settings



may be among the appropriate resources or new services may need to be developed. The educational placement must match the functional assessment of the child's strengths and weaknesses.

For each individual evaluation the persons described in Section 311.1 to 311.6 shall meet to write the IEP. In addition those persons described in 311.7 shall be included in the Team meeting at the discretion of the Administrator of Special Education.

## **Obtain Parent(s)' Decision**

Most parents are not prepared to evaluate and accept or reject an educational plan immediately when it is presented to them. They must be given the opportunity to participate in the development of the plan, and to ask questions about its implementation and implications (see Sections 311.0, 317.0, and 324.0). Most parents benefit from the chance to think about their questions and reactions and then consult again with the TEAM chairpersons before deciding whether to accept the plan. No later than thirty days after the parents have been sent a copy of their child's individual education plan they must decide whether to accept it. Chapter 766 regulations specify the resources which parents have if they reject the plan or wish to obtain a second evaluation before

deciding on the intervention to be made (see Sections 324.0, 325.0, and 328.0). It is important that parents feel well informed and well counselled during this (and all) steps in the assessment process. If they remain confused or anxious they will not be important partners which they must be if the implementation of the education plan is to be successful.

### **III. DECISIONS ABOUT ASSESSMENT PROCEDURES**

#### **What Should be Included In The Assessments?**

##### **Components of Assessment**

The possible major components of a child's assessment, as defined by the Chapter 766 regulations, are (1) the family history, (2) an educational assessment and history, (3) a health assessment, (4) classroom performance review, (5) a psychological assessment (see Figure 4). Not all children referred for assessments will receive evaluations in all areas since this depends on the nature and severity of the child's problem. At the minimum, all referred children must receive an assessment by a teacher who recently had or currently has the child in a classroom or other teaching situation and an educational assessment and history by a school district representative. (see Section 319.0). If the child is a preschooler, the observation of the child's functioning in a group setting can take place in a day care or preschool, if the child is enrolled or can be placed in such a setting for observation. In some cases — especially those where preschool settings are sparse — the child's performance will be assessed in only the home setting.

The expected outcomes for each component are listed in Figure 4. In every case, the emphasis is placed on obtaining



**Figure 4**  
**ASSESSMENT COMPONENTS AND PROCEDURES**

<b>Assessment Component</b>	<b>Expected Outcomes of Assessment</b>	<b>Person Making Assessments</b>	<b>Procedures Most Commonly Used</b>
Family history	<ul style="list-style-type: none"> <li>-Pertinent family history</li> <li>-Child's developmental history</li> <li>-Estimates of child's attributes</li> </ul>	<ul style="list-style-type: none"> <li>-Nurse or</li> <li>-Social worker or</li> <li>-School counselor</li> </ul>	<ul style="list-style-type: none"> <li>-Interview</li> <li>-Observation</li> <li>-Rating Scale</li> </ul>
Educational assessment and history	<ul style="list-style-type: none"> <li>-History of child's education</li> <li>-Overview of school progress</li> <li>-Child's current school standing</li> </ul>	<ul style="list-style-type: none"> <li>-Administrative representative</li> </ul>	<ul style="list-style-type: none"> <li>-Interview</li> <li>-Record/case review</li> </ul>
Health assessment	<ul style="list-style-type: none"> <li>-Comprehensive health assessment</li> <li>-Medical problems</li> <li>-Physical, sensory, neurological and other problems.</li> </ul>	<ul style="list-style-type: none"> <li>-Physician</li> </ul>	<ul style="list-style-type: none"> <li>-Clinical examination</li> <li>-Observation</li> </ul>
Performance in group and/or home setting	<ul style="list-style-type: none"> <li>-Specific behavior/developmental abilities</li> <li>-Readiness, achievement and functioning levels</li> </ul>	<ul style="list-style-type: none"> <li>-Teacher or</li> <li>-Early childhood specialist</li> </ul>	<ul style="list-style-type: none"> <li>-Observation</li> <li>-Rating Scale</li> </ul>
Psychological assessment	<ul style="list-style-type: none"> <li>-Comprehensive functioning assessment</li> <li>-Psychological problems</li> </ul>	<ul style="list-style-type: none"> <li>-Psychologist</li> </ul>	<ul style="list-style-type: none"> <li>-Standardized tests</li> <li>-Observation</li> </ul>
Specialists assessments	<ul style="list-style-type: none"> <li>-Functioning assessment in special area</li> <li>-Specific problem areas</li> <li>-Suggestions for meeting needs</li> </ul>	<ul style="list-style-type: none"> <li>-Specialists (i.e., speech therapist, occupational therapist, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>-Standardized tests</li> <li>-Clinical examination</li> <li>-Observation</li> </ul>

a functional assessment of what the child can and cannot do in certain domains of development, a description and possible explanation of a child's major needs, and explications of means to address the needs.

Because of the difficulties involved with assessing young children, it is recommended that the assessment process — especially for children referred for problems in the development areas (see Figure 3) — begin with the family history and educational history review, followed by the classroom performance observations, by health assessment, and finally by psychological assessments and other specialists evaluations if needed. In this way, the information learned from the various assessment components can be synthesized and assimilated by the case coordinator, parents, and other TEAM members before decisions are made about what types of other assessments are needed. This sequencing of components usually would be the most cost-efficient. If the parent consents, it is advantageous to do the family history on a home visit, since it frequently offers an opportunity to observe the child's performance in his/her most familiar setting.

Because children — even two four-year-olds of the same sex with the same specific disability — are so different, each child must be treated in a unique and specially-individualized manner throughout the assessment process. In addition, the assessments in each component should

always be placed within the child's total social-cultural environment in his/her home and in any group settings in which the child functions. The assessment process begun after the child is referred should be the beginning of an ongoing assessment/evaluation process that will continue once the child is placed in a particular program, regardless of whether (s)he is determined to have special needs. Thus, regardless of disability or age, each child should receive an individualized education at all times.

The selection of assessments shall be determined by the Administrator of Special Education, subject to Section 317.3 which provides that a child who is likely to be placed outside of the regular class for more than sixty percent of the time shall have a medical, psychological and home assessment as described in section 319.3.

## **Who Should Be Included In The Assessment Procedures?**

### **Role of Parents**

The parent should be involved in every step of the assessment process. In addition to the fact that parent participation is guaranteed by the state and federal laws (see Section 317.0), parents have the most information about the present functioning and past history of the child. In essence, the parent is the **first** and often **best** assessor of his/her child's functioning and problems. The assessment process should offer parents a means through which they can communicate and collaborate with other persons and community agencies to understand their child's potential and difficulties and to obtain the best set of services for their child.

## Personnel Requirements

Chapter 776 regulations specify that each assessment component must be completed by a professional who specializes in the relevant area; e.g., physician-health assessment; psychologist-psychological assessment; and teacher-classroom performance or early childhood specialist-group or home functioning (see Figure 4). However, the most critical requirement of the personnel making the assessments of young children is that the professional must have had substantial experience with young children. This is crucial to the validity and usefulness of the information yielded through the assessments. If the assessor does not have this critical knowledge about and experience with this age group, s(he) will not be able to interpret the data from the techniques into a functional assessment of the child's strengths and weaknesses. In fact, one major problem in identifying and assessing young children's problems and consequently misplacing them in unsuitable educational programs is attributable to professional assessors who are qualified in one field, but inexperienced with young children. Thus, the case coordinator should identify and use only professionals who specialize in the early childhood period as assessors.



## **Location of Assessments**

The location (e.g., in the school, in a day care setting, in Head Start Center, in the child's home, in a clinic, etc.) at which most of the assessments are performed varies among school districts and is dependent on a number of variables: (1) type and severity of child's disability; (2) geographic location of school (rural, suburban, urban); (3) available resources in the school and community; (4) parent's preferences; and (5) funding sources. It is extremely important that assessments of young children be made in the most comfortable and/or familiar setting to the child in order to create opportunities for the child to show his/her most competent performance.

The location of the assessments should be as close to the child's home and community as possible in order to guarantee maximal linkages to the other services and individuals in the school and its community. However, this is not always possible in the case of many severely-impaired, multiply-handicapped children who usually are evaluated best by a multidisciplinary assessment team located at a clinic or hospital who specialize in diagnosis and assessment of these children. The same would be true of

children with serious impairments in hearing and/or vision. Because of the relative low prevalence of these and other severe problems, there are only a handful of qualified multidisciplinary teams in the state who can make assessments. In this case, the assessment team of a specialty clinic or department in a medical center in a larger urban area closest to the child's home should be selected.

On the other hand, children with mild or moderate problems in any domain of development (see Figure 2) ought to be able to be assessed by a team composed of community-based professionals. It is preferable to use qualified professionals within the community and school whenever it is possible for many reasons: (1) they are closer and can collaborate easier with both school personnel and parents; (2) they have the potential to become involved in the future progress of the child; (3) they can participate in an early childhood community network; and (4) they are often better able to understand the social-economic culture and environment of the child. Thus, whenever possible, assessments should be done by qualified professionals in the child's most natural settings (e.g., home and school); if this is not possible, the assessments should at least be within the child's geographic community.

## **What Type of Assessment Procedures Are Most Commonly Used?**

### **Interviews**

The interview is a major assessment procedure used to collect data about a child during the assessment process. The majority of data used for the family history component of the assessment comes from an interview of the parent(s) by a trained school professional (e.g., nurse, social worker or school counselor). In addition, interviews with other professionals are used to collect past information, including an educational history whenever appropriate, and data about the child referred for an evaluation.

**Standardized or structured** interviews are used to collect the same information from all interviewees (e.g., parents, other professionals, etc.). In a standardized interview the wording and sequence of questions is determined in advance; in addition, each person is asked the questions in exactly the same way. Sometimes the interviewee is asked to select his/her response from a predetermined list of responses. Examples of instruments which use a standardized interview schedule to obtain information about a child from a parent or significant other adult in the child's life are the Vineland Social Maturity Scale and the Preschool Attainment Record (see Appendix B). In the nonscheduled standardized interview, the interviewer attempts to get the

same information from each interviewee, but the wording and sequence of the questions varies so that the maximal effectiveness with each person can be achieved.

**Nonstandardized or unstructured** interviews are used to identify certain issues and probe new areas of inquiry. There is no uniformity or questions asked or issues explored with each interviewee. Basically, the nonstandardized interview is an informal inquiry into a person's knowledge and experience which allows for maximum flexibility in form and content. Examples of nonstructured interview schedules are the interviews used by the early childhood specialist in obtaining a family history from a child's parents and in acquiring information about the child's developmental history and functioning from other service providers.

In general, the more unstructured and informal interview formats are used in the early childhood assessment process. However, since a major influence on the interview is the interviewer, special emphasis must be placed on the control of the interview biases in the assessment process; in order to insure the generation of technically-sound data from interviews, the interviewer must strive to be objective while collecting the necessary useful information in a pleasant and professional manner.

## **Observations**

Observational procedures provide a major source of data



about a young child's developmental level and functional assessment. It is especially important that a skilled, unbiased observation be made of the child in at least one of his/her natural environments (e.g., home, school, day care, etc.). There are four major observational methods: diary descriptions, specimen descriptions, event sampling and time sampling. These procedures are categorized as either "open" to all diverse phenomena occurring at one time or "closed" to everything but very uniform and prescribed phenomena.

A **diary description** is an open observation procedure in which intensive coverage in extended sequences is recorded verbatim. The data is analyzed by classification and interpretive study. This is the most time-consuming, as well as thorough way to collect data via observation. A **specimen description** is an open observational procedure in which everything of a particular ongoing behavior in a particular situation is recorded in a detailed sequential narration format. The data is analyzed by interpretive study or by coding, scoring and statistical analysis.

Logs and journals of a child's performance are examples of observation using diary and specimen description formats. Accounts of children's behavior using ongoing logs, journals or other open observational procedures can be extremely informative in assessing a child's strengths and weaknesses as well as in indicating growth and development



in various domains. Such observations are an integral and necessary part of the child's assessment in a group setting, which is required in all evaluation procedures, or in the diagnostic classroom for children on whom further assessment information is required after the evaluation procedures are completed.

**Event sampling** is a closed observational procedure that requires on-the-spot coding or narration or both. It is a technique used to record behavior as the desired event one wants unfolds. Various social skills, behavior and personality traits are assessed using this technique. The resulting data is coded and usually used in statistical analysis. **Time sampling** is a closed observational procedure that requires on-the-spot coding or narration or both. It is an observing process that requires the recording of selected behaviors as they happen in precise time spans. Most observation measures of social skills or behavior traits use a time sampling approach with a predetermined set of categories. The data from this procedure are usually coded and used in statistical analyses. Because of the cost and time needed to collect data about a child using these two closed observational procedures, they are rarely used in the assessment process.

Observational procedures can be used to assess a child's behavior in his/her everyday environs, such as home or school naturalistic settings, or in a contrived setting which has been designed to reveal something about a specific

behavior or social skill. Observations made under the latter conditions are sometimes called **situational measures**. For example, observations made in a contrived setting with several children and a limited number of toys could be used to assess a child's cooperation and sharing strategies; observations of a child in a structured group setting could be used to judge his/her leadership and related group skills; observations of a child during the testing situation could be used to assess the child's anxiety, stress, or coping abilities.

The precise type of observational procedure used depend on many variables: time, cost, purpose of observation, observer, etc. However, in all cases in the early childhood assessment process, the observer of young children should be a trained and skilled observer who is familiar with young children. In addition, whenever possible, the observer should use a systematic approach and recording system in as many settings as possible to insure that an objective functional assessment of the child is made.

## **Rating Scales**

A commonly-used way of assessing children's development is via rating scales filled out by adults significant in a child's life (e.g., parent, teacher, physician, etc.) Thus, a rating scale is used to learn how someone else judges or assesses a child's behaviors and feelings. One convenience

of this measure is that the child does not have to be present at the time of the evaluation. Rating instruments are designed to measure the child's impression on a particular judge, usually a parent or a teacher. Broadly speaking, rating scales are a type of observational measure. Examples of rating scales used to assess a child's performance are the Gesell Developmental Schedules and the Learning Accomplishment Profile (see Appendix B).

Rating scales usually focus on describing or judging whether a child possesses a specific behavior trait, attribute or skill. Thus, many rating scales are **criterion-referenced** instruments, meaning that the scores or ratings have meaning in terms of what the child knows or can do, rather than in terms of their relation to some outside external group. In order to make a scale most useful, the traits or behaviors must be clearly defined and understood by all raters. Errors in rating are usually attributable to misunderstanding of an ambiguous term, to conscious and unconscious biases, and to limited information about the child being evaluated. Some traits and behaviors are easier to evaluate than others. For instance, overt behaviors, such as following directions or the ability to play with toys, are usually more accurately assessed than covert traits, such as emotional control or honesty. In addition, some children are easier to rate accurately than others. Thus, rating scales used for collecting information on

a child's development in the assessment process should be used by an experienced early childhood specialist in as objective a manner as possible.

## **Standardized Tests**

Standardized tests are systematic samples of a child's behavior or functioning under prescribed conditions. The child's performance on these tests is scored according to definite rules and is usually compared to some external reference group. Thus, most standardized tests are **non-referenced** instruments; i.e., the child's score is interpreted by comparing it to a normative group, which has been established according to statistical rules and properties. Examples of norm-referenced standardized instruments are the McCarthy Scales of Children's Abilities, the Peabody Picture Vocabulary Test, the Stanford-Binet Intelligence Scale and the Wechsler Preschool and Primary Scale of Intelligence (see Appendix B).

Most standardized tests used in the assessment process are a direct individual type of assessment which is based on the following assumptions; (1) that the measure can be understood by the child, (2) that there is a good rapport between the administrator of the measure and the child, (3) that all questions will be interpreted the same way by all children, and (4) that there is a direct relationship between



the child's behavior and his/her capabilities. These standardized tests usually present information visually to children with pictures, words, or both, to which the child is asked to respond verbally and/or in writing with a check, a circle, a word, a sentence or a paragraph.

Among the advantages of standardized tests are the following: (1) Their standardized stimuli (i.e., sentences, pictures, words, etc.) provide uniformity across testing situations; (2) They are relatively easy for trained professionals to systematically code and score; and (3) Published norms are available to facilitate comparisons to similar groups of children. On the other hand, among the disadvantages of these techniques are the following: (1) Children sometimes give answers which they think adults want (2) Items sometimes are ambiguous and too general, thereby making findings difficult to interpret; (3) Scores are difficult to translate into functional assessment; (4) Children's performances are often more a reflection of a strange situation than of their competence; and (5) The structured format does not allow enough flexibility to assess the construct being measured.

**Projective techniques**, a major type of standardized tests which are used in clinical assessments, refers to a group of unstructured tasks or situations in which a child is encouraged to use a relatively unconscious process to



attribute certain attitudes, thoughts, emotions and feelings to other persons; to attribute his own needs to others in the environment; or to draw inferences from an experience. The stimuli for this process include pictures, inkblots, incomplete sentences, words, dolls, or drawings. Characteristics of the responses given by children to these tests are noted by the following: the breadth of responses permitted; the lack of awareness of responses that are complex in quality; and the fantasy quality of the answers, which are not structured by formal rules of right or wrong. Examples of projective techniques are the Children's Apperception Test, the Goodenough Harris Drawing Test and the Thematic Apperception Test (see Appendix B).

The projective technique of testing originated in the clinical setting for diagnostic purposes and has remained there predominately over the years. It is an impractical measure to use in the typical classroom or early childhood assessment process because of its cost, time requirements, and need for specialized personnel. Projective measures must be administered by professionals who have had extensive training in the administration and scoring of projective techniques. Furthermore, scoring and interpretation of children's responses are largely inconsistent, even between two clinicians using the same instrument. The tests are only as valid as the clinician's subjective judgement and intuition. In fact, no one projective

test has proved to be sufficient for a diagnosis by itself. They can give only supportive evidence in the evaluation of a child when used with other diagnostic tools.

## **Clinical Examinations**

The clinical examination consists of a series of diagnostic procedures used by a professional/specialist to assess a child's strengths and weaknesses within a specific area of behavior or development. The physical examination is the most frequent administered clinical examination to young children. Although the examination consists of a fairly standardized set of procedures and concerns, it is not as rigorously administered as the standardized test described above. A clinical examination is actually a combination of the other assessment procedures: interviews, observations, rating scales, and standardized tests. However, clinical examinations usually focus on producing a categorical diagnosis rather than a functional assessment of a child's development.

## **Record Reviews**

The record review, which is often used to learn about a child's functioning status, is an unobstrusive measurement technique. Since these measures are usually generated without the knowledge that anyone will use them as an assessment indicator, they are nonreactive and unbiased;

i.e., they are least likely to interact with and thereby bias that which they are measuring. For example, the number of days absent from school that can be obtained from school records. Other records found in schools which could be used for assessment purposes are records of activities undertaken and completed, sign-in sheets, circulation records, bills and invoices, assignment sheets, activity or field-trip rosters, parental permission slips, assignments, disciplinary actions, and grouping assignments.

Using information from school records can be problematic. Frequently the records are incomplete and/or inconsistent in quality. Sometimes scoring and interpreting the contents of the records — especially narrative comments and descriptive sections — can be difficult to interpret objectively and therefore of limited value.

## **What Are The Major Considerations in Selecting Appropriate Assessment Techniques?**

### **Areas of Concern**

There are many questions that one should ask in selecting an assessment technique or in judging the usefulness of data from an assessment technique which has been used. These questions are divided below into three areas of

concern: (1) appropriateness for young children, (2) administrative and practical issues, and (3) technical quality standards. If an instrument is deficient in any of these areas, the data collected from it is most questionable and often of little use in the assessment process. Most of these questions apply to all of the assessment techniques discussed in the previous section.

Appendix C includes a worksheet for recording information about an assessment instrument which is presently being used or is being considered for future use. Unfortunately, some aspects of the desired information about early childhood assessment measures either do not exist or can only be found after an extensive search of relevant literature. This means that often the final selection of an instrument is made without all the relevant information. Nonetheless, it is very desirable that every participant in the early childhood assessment process be aware of these concerns and understand their implications for assessing and placing young children. Appendix B contains an overview following the worksheet guide for some of the most frequently used instruments in assessing young children.



## **A. Appropriateness For Young Children**

### **1. How appropriate is the content of the instrument for the development and/or comprehension level of the children assessed?**

The capabilities and skills appropriate for a child's developmental level must be taken into account in the selection of an instrument. Some of the key variables which must be considered are the child's native language, oral comprehension level, attention span, vocabulary, and special needs (e.g., physical, sensory, or other limitations). In general, younger children do not read or understand oral instructions — even when given individually — well enough to give valid responses to self-report paper-and-pencil inventories. In fact, many instruments for younger children are actually cognitive tests — or more specifically, vocabulary tests.

Because of the problems which occur in assessing the development of most younger children, observational procedures, rating scales and unobstrusive measures are often better than standardized tests in giving a comprehensive assessment of a child's functioning level.

### **2. How appropriate is the content of the instrument for various subgroups of the target population (i.e., groups defined by race, culture, sex, etc.)?**

The instrument should provide assessments which are equally expected or plausible, regardless of the child's race, culture, sex, native language, or other background variables. The items should be of equal familiarity and difficulty to all children assessed by the instrument. In many of the social



and emotional areas of development it is very hard to develop a totally culture-free assessment tool. For example, successful competence in different school settings and environments is defined to a large degree by the adults' differing sets of expectations for children in those settings. All assessment procedures used in the evaluation process should not discriminate in any way against any child (see Section 213.0).

**3. How appropriate and appealing is the test format? Is the visual organization (i.e., format of the pages and pictures) pleasing?**

The instrument's format should be appropriate for both the child and the assessor. For example, if the instrument is a rating scale to be completed by a teacher, the format should be easy to follow and provide for the most efficient use of the adult's time; if the measure is a standardized test, then the format should be both pleasing to the child and appropriate for the child's development level (e.g., pictures instead of words should be used more often in assessments of younger children; action items should be appropriately mixed with items that require sitting, etc.), in order that the child's maximum effort is sustained throughout the procedure.

**4. How appropriate are the instructions for the assessment procedure? Are they standardized?**

The instructions to the administrator of the assessment procedures should be precise, and understandable for each question or item in the instrument. In addition, they should

be standardized (i.e., uniform across all testing situations for all children). If the measure is directly administered to the child, such as in the case of standardized tests, the instructions must be appropriate for the developmental level and/or reading and oral comprehension level of the child.

**5. Is the procedure for recording responses appropriate and adequate?**

The way in which a child's responses are recorded should be simple, direct, and standardized (i.e., uniform across all situations to specifications elaborated in the manual). In the case of rating scales (completed by adults), interview formats and observational recording forms, the format should be very efficient, clear and simple for the adult making the assessment. In the case of procedures involving standardized tests, the responses should be appropriate for the child's age and developmental level. For example, young children cannot write or fill in responses as do older children; instead, a popular response format asks the child to circle the most appropriate response (e.g., faces representing various emotions). Often when young children are assessed in an individual testing situation, the adult records the child's verbal or physical (i.e., pointing to the answer) response to each item.

## **B. Administrative and Practical Concerns**

### **1. What is the mode of administration of the measure?**

The mode of administration (i.e., administered on an individual basis or to a group setting) will depend on the type of measurement technique selected. Administration in large groups and to some extent, small groups, is not often feasible with younger children; instead it is preferable for younger children to be administered standardized tests individually. In all cases the administration procedure should be easy to understand and follow.

### **2. How long does it take to complete the assessment procedure?**

The time required to make assessments of children's overall development ranges from periods as short as ten minutes (e.g., rating scales and observations) to periods of two hours in duration or longer (e.g., some observational procedures and standardized tests). Furthermore, some assessment procedures (e.g., observational procedures) require that data be collected over a series of time periods. There are many variables (e.g., variables assessed, techniques used, use of results, etc.) which affect the relationship between the amount of time an assessment procedure takes and the adequacy or quality of that procedure. How many times the assessment procedure will be used during the assessment process must be also considered.

### **3. Who should administer the procedure? How much training is needed?**

Some of the assessment procedures (e.g., rating scales, standardized test, observations, etc.) make use of an existing staff member such as the teacher, school psychologist, or social worker as the administrator of the measure while other assessment techniques (e.g., clinical examinations) require the use of outside professional specialists. The amount of formal training required of the person who will administer the procedure ranges from very little (e.g., rating scales, some observations, some interviewing, etc.) to several weeks or more (e.g., standardized tests, some observational procedures, some interviewing, etc.). However, even in the cases where minimal formal training is required, a minimal amount of preparation to familiarize oneself with the procedure is necessary before the assessment procedure is used. In order to insure that data be collected under similar conditions using the same definitions of terms, it is highly recommended that there be some type of training or briefing session for all administrators of assessment techniques in the evaluation.

### **4. How expensive is it to use the assessment procedure?**

The expense of using an assessment procedure should be calculated, considering the following key variables: cost of acquiring copies of the measure, amount of training required of administrators, time required by personnel to administer



the measure, costs of materials for scoring, time required by personnel to score and code responses, number of children assessed, and number of times assessments are made during the evaluation.

## **C. Technical Quality Standards**

### **1. Is the instrument reliable?**

An important aspect of the quality of data concerns the reliability of responses and scores. That is, to what extent is a child's score an approximation of his/her true score and not the result of errors, either random or systematic. Reliability is not an all or none principle; instead, it is a matter of degree. None of the assessment procedures presently available is in itself perfectly reliable.

Reliability estimates should be available for groups and subgroups of children which resemble the child being assessed. In other words, is the test reliable for all important subgroups of the population as well as the total population? Even though minor fluctuations in a child's performance from time to time can not be eliminated (i.e., random error), the reasons for major and/or consistent fluctuations (i.e., systematic errors) must be located in the individual himself/herself or in his/her environmental conditions. Several types of reliability calculations are mentioned below.

Estimates of **internal consistency** (Kuder-Richardson,



alpha, split-half, or odd-even) refer to the consistency of results obtained throughout the assessment procedure at any given time (i.e., how accurately does the instrument assess a child's capabilities at a particular point in time).

Estimates of **stability** (often called test-retest estimates) refer to the consistency of results obtained with the assessment procedure at two different points in time. Therefore, test-retest reliability is very related to internal consistency estimates, since the measure must have a high degree of reliability when used at one point in time or it will have little predictive value for an assessment taken at another point in time. The time between the two administrations of the measure generally ranges from two weeks to several years.

**Interrater** estimates (e.g., intertester or interjudge agreement estimates) refer to the consistency of results between two or more testers, raters, judges or observers. This type of coefficient is extremely important in considering the adequacy of an observation system in rating procedure. Often, even in the case of complex observation systems, high reliability coefficients between observers or raters can be achieved with extensive training procedures.

A shorthand way of rating the reliability estimates for standardized tests reviewed is as follows: .90 or above, excellent; .80 to .90, good; .70 to .80 fair; .70 or below, poor.

## 2. Is the instrument valid?

The most important aspect of the quality of the data concerns the validity of the assessment procedure. That is, to what extent do the tests actually assess what they say they are measuring? Instrument names and variable labels can be deceptive; just because a measure claims it assesses “self-concept” or “language development” **does not mean** that it does. No measure has validity in the abstract; instead, it must be determined with respect to a particular target group with reference to a particular use for which the test is being considered.

Validity is usually classified under three major categories: content, criterion-related, and construct. Occasionally, the term “face validity” is used to indicate whether the instrument, on the face of it, appears to assess what it claims to measure. The term refers, not to what the test actually assesses, but to what it appears superficially to measure. Even though face validity is not a rigorous concept, its presence, in addition to the other categories of validity, reinforces the validity of the measure.

**Content validity** refers to how well the content of the instrument samples or assesses the child behavior about which conclusions are to be drawn. Content validity is built into a test from the beginning through the choice of appropriate items and categories. In determining content

validity the following questions should be addressed with respect to the measure: (1) Do the items and children's responses to them seem understandable? (2) Are some items too hard or too easy for all or some groups of children? (3) Are there cultural biases? (4) What are the correlations of each item with the total measure's score?

**Criterion-related validity** refers to how well the instrument compares with other variables which are considered to be direct measures of the behavior or characteristic being evaluated. How the measure correlates with other estimates of growth, behavior, and development taken at approximately the same time as the instrument being considered is called **concurrent validity**; how the measure compares with similar estimates taken at some future point in time is called **predictive validity**. Comparison criteria not only differ across situations and over time but they are also like to be complex.

**Construct validity** refers to the extent to which the test may be said to measure a theoretical construct or trait. To establish construct validity the theoretical origins of the measure are thoroughly investigated to determine if there is a well-established basis for the measure. One statistical procedure often used for the identification of psychological traits is factor analysis. In order to demonstrate construct validity, not only must the measure correlate highly with

other criteria with which it should theoretically correlate but also it should **not** correlate significantly with variables from which it should differ.

### **3. Are adequate norming groups available?**

Norm groups for large scale norm-referenced tests, such as standardized intelligence tests, are usually a stratified random sample of children of various ages from regions across the nation. It is desirable for a measure to have adequate norming groups if the results of the instrument will be used to make a categorical diagnosis. In determining the adequacy of norming groups, the following questions should be addressed: (1) How were the standardization samples selected? (2) When was the norming done? (3) Where were the norm assessments taken? (4) What is the age range of the norm sample? (5) Are there any inherent biases in the sample? (6) Were the norm scores obtained under replicable conditions?

In constructing the sample for the norming population, the test developer tries to obtain a proportionate grouping of various children so that all the major factors which might affect the test scores (e.g., geographic area, average enrollment in school, type of area, socioeconomic status, etc.) are well represented in the final norming sample. It should be pointed out here, however, that very few measures for young children have national norming groups (see Appendix B).



#### **'4. Is the scoring system adequate?**

The scoring procedures for the assessment tool should be examined to determine if scores can be derived easily and efficiently. The ease with which the instructions can be followed and the time required to score should be considered.

Who is required to score the instrument is also an important consideration in judging the adequacy of the scoring system. For example, instruments may be scored by professional staff members, by paraprofessional staff members, or be sent out to be machined scored. A consideration in terms of time and money is whether the person who does the scoring needs any specialized training; this is most frequently true in coding and scoring many standardized test procedures.

In order to fully understand how the scores from the measure are interpreted and used in order to determine if the procedures are appropriate for the specific local evaluation, the evaluator should answer the following: (1) Are the scores reported in simple, clear and meaningful terms or descriptions? (2) Does the interpreter need special skills or training? (3) Are any conversions between types of scores (e.g., raw to normed, etc.) fully explained and easy to do? (4) Can educational decisions, either for individual children or for groups of children, be made from the scores and/or norms provided?



## **Recommendations**

Before selecting an instrument for use in the assessment process and/or when using the result of an assessment report based on an instrument, the evaluator should review the adequacy of the measure and be aware of its limitations as well as strengths. Very few instruments can meet all of the criteria specified in this section. For this reason, it is recommended that the assessment process use a variety of assessment techniques (e.g., standardized tests, observations, interviews, etc.) administered by a variety of professionals. Whenever possible, an established and preferably standardized instrument should be used with a locally-developed instrument.

The selection of appropriate assessment procedures for young children, their administration, and their interpretation is often a very difficult process, requiring a great deal of expertise and knowledge about young children. Sometimes the type of instrument needed has simply not yet been developed, and an assessor must use the best of what is available and then interpret the results with great caution. Some of the factors which can lead to inappropriate testing or inaccurate test results are as follows:

- mistaking one handicap for another
- mistaking cultural differences for handicaps
- mistaking normal physical or mental immaturity for handicaps

- testing a child who is not used to test-like situations
- testing a child when he or she is not feeling well
- testing a child in a language that is not his or her home language
- testing a particular developmental area in a child by requiring a response that involves skills in which the child is handicapped (for example, testing cognitive functioning by requiring a verbal response from a speech impaired child, or a motor response from an orthopedically handicapped child).

In addition, even if children are given tests that are appropriate to their age, sex, cultural background, native language, and suspected handicaps — and that are technically sound — test results can be inaccurately interpreted. Thus, assessments of young children should be made with a great deal of caution at all times.<sup>5</sup>

## **IV. PRACTICAL CONSIDERATIONS**

### **Time**

The Chapter 766 regulations are specific about the time requirements for completing assessment procedures. Within five days after the request for referral is made, the parents are to receive written notice explaining the nature of and the plans for the assessment process (see Section 317.0).

Evaluations or assessment procedures and the recommendation of an individual education plan are to be completed within thirty school working days after the school receives the parents' permission to perform the assessment. These time constraints are difficult to meet. In order for schools to comply with them, they must have a well coordinated process and the necessary staff to respond to referrals. The appointment of an early childhood evaluation team coordinator can facilitate this process. This coordinator will oversee all procedures relating to assessment of young children, maintain relationships with day care centers, clinics, and professionals who work with young children, and will maintain current files about regulations and funding sources which affect services for young children with special needs.

### **Personnel**

The Chapter 766 regulations require that personnel who screen three- and four-year-old children and kindergarteners

must have training and/or experience in working with children of this age (see Section 305.0). Because the assessment of young children is different from the assessment of school age children, it is even more important that every assessor of the young child have experience and training with young children. Inexperienced personnel are likely to make incomplete or incorrect assessments and recommendations which may have detrimental and long-lasting effects for young children and their families. The best training for assessors of young children is a solid foundation in normal and abnormal child development, extensive supervised practical experience in working with young children, training and supervised experience consulting with parents, as well as specialized training in one's particular field.

### **Money**

Concerns about money for early intervention services include the location of funds as well as the allocation of these funds in a cost-efficient manner. In addition to the primary justification for early intervention as a way of helping children reach their full potential, there is also a sound economic rationale for such programs. Prevention of special educational needs through early correction of disabilities is much less expensive than the long-term remediation of severe disabilities which have acquired an extensive overlay of emotional stress.

There are a variety of sources for funding early intervention programs. The regional early childhood



specialists of the Massachusetts Early Childhood Project are an important resource of information about funding. They are aware of standard reimbursement procedures from state and federal funds and of special grants which may be tapped to support particular programs or projects. In order to facilitate communication and share knowledge about available services, the Massachusetts Early Childhood Project has published an extensive list of programmatic and funding resources which are available throughout the state for children from birth to six years old.<sup>6</sup>

Imaginative and conscientious use of available local services can reduce the costs of an effective early intervention program. For example, Head Start centers can apply for certification as Chapter 766 placements for special needs children. Thus, 766 children who are eligible for Head Start funding and who have special needs may be financed with Head Start funds without additional local school system dollars. Other placements may have scholarship funds or be supported by other public monies (e.g., Title XX, Medicaid, Title V, etc.). A day care center or nursery school can become licensed to serve special needs children. The Office for Children has information about licensing procedures. An early childhood coordinator who establishes communication with local resources can significantly reduce the time, financial and emotional cost of assessments.

## **Techonology and Theory**

The technology for assessing young children is much less complete and reliable than that for older children. Because young children develop rapidly, immaturity is often difficult to distinguish from abnormality. The criteria for normal development are often less clear and precise than for older children whose academic progress is well defined. In addition, the state-of-the-art about children's development in the social and emotional areas of functioning is still in its infancy. Thus, the creation of technically sound and valid instruments in these areas is almost impossible at this time.

Because young children are not readily available in large numbers the assessment instruments are frequently normed on small or non-representative samples. For all these reasons, the art of assessment of young children is not well developed at this time. The relative incompleteness of early assessment technology is no excuse for neglecting young children. However, it does necessitate that assessments of young children be stated in provisional terms and that they be reviewed frequently. Even when diagnoses are provisional, recommendations for services can be made with certainty.

## **Location of Children and Resources**

The public schools have only recently become responsible for providing services to three- and four-year-old children. As

yet the bridges between public schools and other resources for young children are rare and in many cases rather tenuous. The use of imaginative publicity is necessary in order for parents to learn of the services provided by schools. For example, radio and television announcements, newspapers, articles, brochures, and posters in pediatricians' offices, grocery stores and nursery schools frequented by parents of young children are some possible publicity channels.

Similarly, the channels for obtaining current training and information for parents and professionals must also be established and maintained. Universities and colleges which train early childhood development specialists are an important source of information. For example, they may sponsor seminars, workshops, more extensive training programs; may maintain resource centers which can be a source of materials and advice; and may supply interns who provide service to children in exchange for supervision. The local colleges and universities are an important resource in every region.

The council for Exceptional Children, the National Association for the Education of Young Children, and other agencies established for young children with special needs are another important resource. They publicize new developments in assessment technology and produce training materials for parents and professionals.

There are many state and federal agencies which provide services for young children. The State Departments of Mental Health, of Public Health, of Public Welfare and of Education all administer programs which benefit from children. The Office for Children, which exists to monitor and coordinate these programs, will frequently be able to recommend services for those children who seem to "fall through the cracks" of other agencies.

Finally, the regional offices of the Massachusetts Department of Education, Early Childhood Project, and Head Start are valuable clearinghouses for resources and information about young children.



## V. CASE STUDIES

The following case studies are examples designed to demonstrate how the assessment process may differ depending upon the severity and type of the child's disabilities and the availability of resources. These cases are illustrative examples which describe types of referral problems and components in the assessment process as outlined in Figure 3 and 4 and explained in the early sections of this guide. Each case is presented according to the steps in the assessment process of Figure 2.

### Case 1 - Don

**Receive referral for assessment.** Don, aged two years and eleven months, is an only child who lives with both parents in a small rural community. He is referred to the local public school system by the general practitioner who has seen him regularly since birth. The general practitioner is concerned because Don has mild cerebral palsy, is approximately one year behind his chronological age in most areas of development, and recently has appeared to be deteriorating rather than progressing in his motor functioning.

**Specify coordinator of case.** In this rural area one early childhood specialist serves several unified districts as TEAM

chairperson and coordinator for three- and four-year-old children. She automatically receives and manages referrals of children in this age group.

**Determine basis for referral.** The early childhood TEAM chairperson calls the general practitioner to learn the basis and the background for the referral. The physician explains the frequency and duration of his contact with Don and describes Don's development. He also provides the name and address of a local children's clinic orthopedic surgeon who had seen Don at the age of one year and one month.

**Meet with parents.** The TEAM chairperson calls Don's parents and makes an appointment to interview Don's mother and observe Don at home. She sends a written confirmation of their appointment to the mother. After speaking with the physician and mother about Don's behavior, at the beginning of the home visit she recommends to the mother that an evaluation including family history, psychological assessment, health examination and behavior observation be performed. She explains this process to the mother, obtains her written permission to proceed with an evaluation, and informs the mother about how to reach her at any time during the process. During this visit the TEAM chairperson discusses Don's behavior and background with the mother and completes the family history component of the evaluation. She observes Don's play and performs a brief developmental screening.

**Collect available information.** Having obtained the parents' permission to consult with professionals who have seen Don, the

TEAM chairperson makes these contacts before arranging any further evaluation. She calls the general practitioner and the orthopedic surgeon, asks for their opinion about the appropriate assessment procedures and requests their written reports summarizing their treatment of Don.

**Decide which assessment procedures and personnel to include and conduct assessment procedures.** On the basis of the information the TEAM chairperson obtains about Don, she determines that a neurological evaluation will be necessary in addition to the other assessments planned at the initial visit. Because this is an additional assessment she had not discussed with the mother previously, she calls the mother and obtains her permission for the specialist's assessment.

Since there are no classrooms for young children operating in the area, she makes a second home visit during which she systematically observes and records Don's behavior using a standard preschool recording protocol. She discusses Don's behavior with other children with Don's mother. On the basis of her structured and informal observations of Don and her interview with his mother, she completes the educational assessment and history as well as the assessment of Don's functioning in his home setting. She knows that the assessment of Don's functioning would be enhanced if it were based on an observation of Don in a group setting or classroom. However, because this alternative is not possible in the local community, the interviews

and observations in the home setting will suffice.

The TEAM chairperson arranges for the early childhood psychologist in a neighboring community to conduct this component of the evaluation. Although trained in different specialty areas, she and the psychologist frequently exchange their services because they are familiar with the conditions in each other's communities. The psychologist sees Don in his office on two occasions and assesses Don's cognitive, perceptual, and motor functioning using several standardized instruments.

A conversation with the psychologist prompts the TEAM chairperson to recommend that a speech and language assessment of Don should be done also. Since this was not previously discussed with Don's mother, she calls her again and obtains her written permission to add another specialist examination to the evaluation. The chairperson arranges for the assessment by the local elementary school speech and language pathologist who has training and experience with young children.

For each evaluation by a specialist the TEAM chairperson completes a referral form (see Appendix C). This form summarizes the reason for referring Don and the specific questions and recommendations which the specialist is being asked to address. This form is meant to supplement and not replace the report which the specialist prepares after completing his or her assessment.



**Collect data from outside referral.** Based on their examinations of Don, both the general practitioner and the orthopedic surgeon recommend that Don be seen by a pediatric neurologist or a developmental pediatrician who could evaluate Don's functioning and determine if there are organic bases for Don's actions. After consulting with Don's parents, the TEAM chairperson arranges to have Don seen by the Department of Pediatrics at the nearest university-affiliated hospital. She then prepares a copy of the outside referral form (see Appendix C) summarizing the available information on Don and requesting the specific information which this outside assessment is expected to provide to the local school system. The pediatric neurologist recommends that Don also be seen by the physical therapist in the hospital. After the chairperson and neurologist consult with the parent, Don sees the therapist who is also sent a referral form.

**Develop individual educational plan.** The TEAM chairperson collects the assessment reports as they are prepared. She remains in close touch with the parents to be certain that they are able to keep the necessary appointments and that their questions about the assessment process are answered as they arise (as much as possible). The TEAM chairperson also reviews all the possible treatment options which are or could be made available in the area. When all the assessment components have been completed, the TEAM chairperson schedules the TEAM

meeting. Don's parents and all the specialists who have seen him attend the meeting. During the TEAM meeting the specialists and Don's parents share their information and develop a complete individual educational plan (IEP).

Recommendations for Don focus on the need for speech, physical therapy, and medical monitoring of his health. Although classroom experience with other young children is highly recommended, the parents prefer to have Don in a home-based program since the nearest classroom setting for young children is 45 minutes away from Don's home. Consequently, the speech and physical therapists each arrange to make two appointments per week with Don — once in their offices and once in Don's home.

The IEP specifies that the results of the treatment plan will be reviewed by Don's parents and the TEAM chairperson after three months and revised if necessary at that time.

**Obtain parents' decision.** The TEAM chairperson explains the IEP to the parents at this meeting, gives them the original and a copy (retaining a copy) and suggests that they think about the IEP before signing it. She arranges for them to call her in a few days to discuss their questions before approving the IEP.

## **Case 2 - Susan**

**Receive referral for assessment.** Susan, aged four years and eight months, has been enrolled in a Head Start

classroom for the past four months. Her teacher calls the early childhood specialist at the local school system after discussing her concerns about Susan's development with Susan's mother. Both the teacher and the mother believe that Susan is "slower" than the other children her age. Her speech resembles that of a three-year-old child; her drawings are still only scribbles rather than more controlled drawings with crayons or magic markers; and her large motor coordination is not as advanced as other children her age. Based on his observation of Susan's skills as well as her rate of progress in the group setting, Susan's teacher in consultation with Susan's mother decides that an evaluation is desirable.

**Specify coordinator of case.** The TEAM chairperson who receives all referrals of children too young to be enrolled in kindergarten also coordinates the follow-up of these referrals.

**Determine basis for referral.** After noting the Head Start's reasons for requesting an evaluation, the TEAM chairperson telephones Susan's mother. The mother expresses her concern about the pace of Susan's development especially in comparison with the other children in the family. During this conversation the TEAM chairperson makes arrangements to meet Susan's mother at the Head Start center later in the week. A written notification of the appointment is sent to the mother.

**Meet with parent.** At the Head Start center the TEAM

chairperson briefly observes Susan in the classroom and then interviews the mother who agrees in writing that an evaluation (including a family history, health examination and behavioral observation) be done for Susan. In taking a family history, the chairperson learns that Susan has reached developmental milestones later than her peers and that she has a complicated birth history. Susan has received regular care from a local clinic but has had no major medical problems nor has she been seen by other specialists.

**Collect available information.** Having obtained the mother's permission, the TEAM chairperson talks again with Susan's Head Start teacher and with the nurse practitioner and pediatrician at the local clinic. Both the teacher and health care providers acknowledge that Susan is a little behind in many development areas. The pediatrician confirms the mother's report that there are no major problems.

**Decide which assessment procedure and personnel to include.** Based on the information available, the TEAM chairperson who is an early childhood specialist decides to do a systematic observation of Susan in the classroom and refer Susan to the speech pathologist of the local school system who is trained and experienced with assessing young children. She decides to wait upon a referral to a psychologist for an indepth assessment until a further point in the evaluation process. Because the assessment by a speech pathologist was not included in the initial evaluation



plans agreed to by the mother, the chairperson calls the mother and obtains her permission to proceed with the speech and language assessment.

**Conduct assessment procedures.** The TEAM chairperson visits the classroom three times during the next week to observe Susan's functioning in a variety of settings. In addition, she gives Susan a developmental screening test on which Susan performs better than thirty percent of the children of the same age in her school district. The speech therapist reports a similar finding: Susan is performing better than twenty-five percent of all children in her age group in the area. Thus, all reports indicate that Susan is "slower" than most of her age-mates, but that she is not functioning at a level which would prompt the early childhood specialists to refer her for an indepth evaluation.

**Develop individual educational plan and obtain parent's decision.** The chairperson holds a meeting with the mother and all persons who assessed Susan. On the basis of their reports, the TEAM chairman suggests to the mother that more assessments be postponed until the chairperson has had an opportunity to observe Susan in her classroom over a period of three weeks. During that time the teacher will keep a daily log of Susan's performance and progress. In addition, Susan will have a vision and hearing screening to rule out possible difficulties in those areas. The screenings will be done by the Head Start nurse as she does for all Head Start children during the year.

Susan's mother agrees to wait until the results of this preliminary data are reviewed before deciding whether further evaluation is necessary. If the observations give any indication that Susan is not making normal progress in her current placement, a more complete educational and psychological assessment will be pursued.

### **Case 3 - Gerald**

**Receive referral for assessment and determine basis for referral.** The kindergarten teacher in a large urban area refers Gerald, aged five years and one month, to the school TEAM chairperson in December. The teacher is concerned because Gerald seems sad, does not participate enthusiastically in school activities, frequently refuses to cooperate during lessons, and is not learning letter names as readily as most children in the class. The teacher has tried to talk with Gerald and give him more attention, but nothing has seemed to change his pattern or behavior. Kindergarten developmental screening completed during the previous May had shown no cause for concern.

**Specify coordinator of case.** The TEAM chairperson in this elementary school coordinates all evaluations. Because she does not have special training in early childhood, she does not personally assess the kindergarten children, but does coordinate the assessment process.

**Meet with parents and collect available information.** The TEAM chairperson asks the teacher about Gerald's home situation before telephoning the parents. The teacher, who is new to the school, has not met with the parents although she has sent notes home. The teacher expresses concerns about Gerald's health since he often has a runny nose.

Although the TEAM chairperson does not personally know this family, she knows that the school nurse has dealt with them when caring for some of Gerald's older siblings. She asks the school nurse to speak with the kindergarten teacher and then to contact the parents to meet with both of them at school. If the parents are not able to meet this request, the nurse is asked to arrange a home visit.

The nurse's call to the mother reveals that the family has been under very high stress during the fall since the father was arrested two months ago. The mother, seemingly stretched to her limit economically and emotionally, is aware that Gerald has not adjusted well to kindergarten but has been afraid to come to the school to talk about him. The nurse explains the importance of the mother's working with Gerald's teacher and informs her that the school adjustment counselor will be happy to meet with her also when she comes to the school. The adjustment counselor is aware of social services in the community and can advise the mother about possible sources of support during the crisis period for the family.

When the mother, the school nurse and the kindergarten teacher meet together, they share their views and perceptions of Gerald. The mother acknowledges that Gerald has had a continual cold with little or no fever during the fall but has received no medical attention. The nurse recommends that Gerald be examined by the school physician and that his hearing be tested carefully. They also decide to request that Gerald be seen by the adjustment counselor from the early childhood special education team which serves the district. The mother agrees with the recommendations and seems relieved to have some help with Gerald's problems. She signs the forms requesting an evaluation.

**Decide which assessment procedures and personnel to include.** Upon learning of these recommendations, the TEAM chairperson arranges appointments for Gerald with the early childhood adjustment counselor, the hearing technician, and the school physician. She completes forms (see Appendix C) which review Gerald's referral problem and describe the particular information sought in the assessment.

**Conduct assessment procedures and collect data from outside referrals.** The physician recommends that Gerald be given several days of bed rest to increase his resistance and be treated with antihistamines. Since Gerald failed the hearing screening test given by the hearing technician, the



TEAM chairperson contacts the mother and obtains her permission to refer him to an audiologist. The audiologist's examination reveals that Gerald has a mild bilateral conductive hearing loss probably associated with the congestion of the head cold. Recommendations from the hearing assessment for Gerald are (1) to treat his cold, (2) to seat him near the front of the classroom, (3) to pay special attention to Gerald's comprehension of auditory directions, and (4) to provide hearing checks during the next several months.

Both the kindergarten teacher and early childhood adjustment counselor observe Gerald in the classroom. In addition, the adjustment counselor interviews him privately. This counselor also meets with the mother and informs her of available services in the community. The counselor recommends that he see Gerald in private play therapy once a week during the next month.

**Develop individual educational plan and obtain parent's decision.** The TEAM chairperson collects the results and recommendations of these assessments. She schedules a meeting with the teacher, parent, and specialists who have seen Gerald. The recommendations made by the specialists are incorporated into an individual educational plan at the meeting. The mother accepts the plan which all agree should be reviewed in three months.

## Footnotes

1. Throughout the guide relevant sections of the Massachusetts Chapter 776 Regulations are noted in parentheses in the text.
2. For detailed information on the screening component as implemented in Massachusetts, see the first publication in this series by Samuel J. Meisels, entitled *A Guide to Early Childhood Development Screening*.
3. Some authors and practitioners refer to this component as diagnosis. However, since the term most frequently refers to delineating the etiology or cause of a condition, we prefer to include diagnosis as one part of a more global assessment process.
4. For a further discussion of these points, see Bradley and Caldwell (1974) and other sources in the annotated bibliography.
5. These recommendations concerning the use of tests noted in all booklets of the *Mainstreaming Preschoolers* series developed by Contract Research Corporation for the Head Start Bureau, in the Administration for Children, Youth and Families, Department of Health, Education and Welfare.
6. The directory, entitled *Funding and Programmatic Resources for Young Special Needs Children and Their Families* by Spencer White and Ann Taylor, is available from the Massachusetts State Department of Education, Division of Special Education, Early Childhood Project. In addition, the Early Childhood Project published a guide entitled *A Directory of Programs for Young Children with Special Needs in Massachusetts*. (available, January 1982)

## Appendix A

### Annotated Bibliography

Abbott, M.S. & Crane, J.S. Assessment of young children. *Journal of School Psychology*, 1977, 15, 118-128.

Presents overview of important issues and problems related to the assessment of young children. Discusses major trends identified by a review of literature on assessing young children. Recommends that teachers need to develop skills in both selection and interpretation of appropriate formal and informal assessment techniques.

Boyer, E.G., Simon, A., & Karafin, G.R. (Eds.) *Measures of maturation: An anthology of early childhood observation instruments*. 3 vols. Philadelphia: Research for Better Schools, 1973.

Compilation of 73 observational systems or rating scales which are appropriate for young children. Each instrument's description includes detailed information on its focus, purpose, use, and coding requirements. Includes abstract descriptions as well as complete copies of instruments.

Bradley, R.H., & Caldwell, B.M. *Issues and procedures in testing young children*. TM Report #37. Princeton, New Jersey: ERIC Clearinghouse on Tests, Measurement, and Evaluation, 1974.

Presents types of decisions to be made as a factor in the selection of tests for young children. Discuss considerations to be made in deciding upon an instrument; practical criteria, validity, reliability, test bias. Examines content of tests in the cognitive, affective, and psychomotor domains.

Buros, O.K. (Ed.) *The seventh mental measurements yearbook*. 2 vols. Highland Park, New Jersey: Gryphon, 1972.

Best known source for locating information on most published or commercially available tests. Gives detailed descriptive data about each test, including a list of references about the instrument and one or more critical reviews of the test. Cross-indexed by author, test title, and measurement topic area.



Cohen, Dorothy H. & Stern, Virginia. *Observing and recording the behavior of young children*. New York: Teacher's College, Columbia University, 1958.

A practical guide to observing and recording children's behavior using on-the-spot running records. Discusses observations of children in a variety of activities. Gives guides for recording children's behaviors during routines and teacher-directed groups, children's interactions with adults and peers, and children's use of language and materials.

Coordinating Office for Regional Resource Centers (CORRC), *Preschool test matrix: Individual test descriptions*. Lexington, Kentucky: University of Kentucky, 1976.

Gives an overview for selecting assessment instruments suitable for young children. Provides detailed information about specific tests using a set of test descriptor forms. Available from ERIC (ED 129-041).

Cross, Lee & Goin, Kenneth W. (Eds.) *Identifying handicapped children: A guide to casefinding, screening, diagnosis, assessment, and evaluation*. New York: Walker and Company, 1977.

Presents important issues, terms, procedures, and interrelationships of components in the early intervention process. Includes an annotated bibliography of early childhood instruments and an overview matrix which compares the instruments according to age, performance factors and primary use.

*Evaluation bibliography*. Chapel Hill, North Carolina: Technical Assistance Development System, University of North Carolina, 1973.

Presents an annotated bibliography for 64 tests for children from birth through five years and 8 tests for parents. Includes addresses where tests can be obtained, references, and an index for quick reference.

Flapan, D., & Neubauer, P.B. Issues in assessing development. *Journal of American Academy of Child Psychiatry*, 1970, 51, 669-687.

Discusses the issues and problems associated with assessing the mental health of young children.



Considers issues concerning the conceptualization of health, the technical quality problems, the prediction of and variation in the developmental progression, and the role of symptoms. Explicates the implications of several definitions of health: (1) health as normality, (2) health as absence of pathology, (3) health as ideal or optimal condition toward which to strive, and (4) health as capacity to maintain development.

Gallagher, J.J., & Bradley, R.H. Early identification of developmental difficulties. In Gordon, I.J. (Ed.) *Early Childhood Education* (the 71st yearbook of the National Society for the Study of Education). Chicago: University of Chicago Press, 1972.

Presents an overview of the issues encountered in assessing the early identification of developmental problems based on an information processing model. Describes early warning systems in reception (vision and hearing), central processing, control mechanisms (learning disability and emotional disturbances), and expression (speech, language and motor). Suggests standards for evaluating instruments and lists a sample of measures.

Hoepfner, R., Stern, C, & Nummedal, S.G. (Eds.) *CSE-ECRE pre-school/kindergarten test evaluations*. Los Angeles: UCLA Graduate School of Education, Center for the Study of Evaluation, Early Childhood Research Center, 1971.

A compilation of information about many published tests for preschool and kindergarten children. Includes ratings by measurement experts for measurement validity, examines appropriateness, administrative usability, and normed technical excellence.

Johnson, O.G. *Tests and measurements in child development: Handbook II*. 2 vols. San Francisco: Jossey-Bass, 1973.

Presents descriptions and information for over 900 child development measures, found by searching 148 professional journals from 1966 through 1974. Includes the following for each measure: author, age range, source where measure can be obtained, type of measure, scoring and administrative procedures, reliability, validity, and references.

Lidz, C.S. Issues in the psychological assessment of preschool children. *Journal of School Psychology*, 1977, 15, 129-135.

Discusses two issues regarding assessment of three-to five-year-old children: (1) whether assessments should be attempted, and (2) what are criteria of a "good" assessment. Concludes assessments can be useful if done under conditions which avoid labeling, minimize problems of reliability and validity, and consider the interacting variables of the child, the task, and the setting.

Meier, J. *Screening and assessment of young children at developmental risk*. Washington, D.C.: The president's Committee of Mental Retardation, 1973.

Discusses the issues and current thinking concerning procedures for early screening of young children who either already have or are at risk of having developmental disorders. Describes instrumentation and procedures for all areas of development: physical, intellectual/cognitive, language, and social/emotional. Includes an annotated index to selected developmental screening tests and procedures.

Mercer, J.R. A policy statement on assessment procedures and the rights of children. *Harvard Educational Review*, 1974, 44, 125-141.

Discusses findings of an eight-year study of school and agency classification procedures for children based on standardized intelligence tests. Argues that current classification procedures violate the rights of children to be evaluated within a culturally appropriate normative framework. Proposes alternates to present testing system.

Northeast Regional Resource Center. *Early childhood assessment list*. Hightstown, New Jersey: New Jersey State Department of Education, n.d.

Presents an annotated bibliography of 60 tests for children from birth through five years. Includes publisher, age range, time requirements, and costs for each measure and an index of tests for quick reference.

Rogers, F.S., Kendrick, W., Shapiro, A., & Fisher, L.H. *Serving handicapped children in Head Start: A practical guide to the implementation of the Head Start handicapped effort*. Newton, Massachusetts: New England Resource Access Project, Educational Development Center, 1978.

A useful guide to components of the early intervention process. Discusses issues, problems, and interrelationships of screening, diagnosis, and functional assessment. Includes descriptions of selected assessment tools and examples of referral forms for assessments made outside the program.

Strully, C.F. *The test analysis: Screening and verification instruments for preschool children*. 2 vols. Harrisburg, Pennsylvania: Project CONNECT, Department of Education, Commonwealth of Pennsylvania, 1977.

A comprehensive guide to 139 screening and assessment tools for preschool children. Includes data for each instrument in the following areas: bibliographic information, descriptive information, examinee appropriateness, administrative considerations, scoring and interpretation, implications for programming, normative data, technical aspects, and references. Provides an index to tests by purpose and by content areas assessed, and an index by author's names.

Walker, D.K. *Socioemotional measures for preschool and kindergarten children: A handbook*. San Francisco: Jossey-Bass, 1973.

Discusses issues and problems associated with assessing socioemotional development for young children. Presents descriptions and information for 143 effective measures. Includes the following for each measure: author, age range, source where measure can be obtained, type of measure, scoring and administrative procedures, norms, reliability, validity, and references.

Wright, H.F. Observational child study. In P.H. Mussen (Ed.) *Handbook of research methods in child development*. New York: Wiley, 1960.

A comprehensive overview of observational procedures for assessing young children. Describes and compares open and closed observational procedures and trait ratings. Discusses the issues and problems associated with observing children.



## **Appendix B**

### **Information On Selected Assessment Techniques**

This appendix includes information on some of the most frequently used standardized procedures in the assessment process. **Inclusion in this Appendix does not mean the instrument is endorsed by the Early Childhood Project** nor that the instrument is adequate and meets all the criteria reviewed in this guide. Those interested in these instruments should inspect the instrument and consult other data on them before making a decision to use them. Special care should be used in considering the use of these instruments with the children who have substantial disabilities.

The instruments reviewed in this appendix include the following:

- Beery-Buktenica Developmental Test of Visual-Motor Integration
- Carrow Elicited Language Inventory
- Children's Apperception Test
- Frostig Developmental Schedules
- Goldman-Fristoe Test of Articulation
- Goldman-Fristoe-Woodcock Test of Auditory Discrimination
- Goodenough Harris Drawing Test
- Illinois Test of Psycholinguistic Abilities (ITPA)
- Learning Accomplishment Profile (LAP)



McCarthy Scales of Children's Abilities  
Peabody Picture Vocabulary Test (PPVT)  
Portage Guide to Early Education  
Preschool Attainment Record  
Stanford-Binet Intelligence Test  
Thematic Apperception Test (TAT)  
Vineland Social Maturity Scale  
Wechsler Intelligence Scale for Children (WISC)  
Wechsler Preschool and Primary Scale for Children  
(WPPSI)

**Name of Instrument:**

Beery-Buktenica Developmental Test of Visual-Motor  
Integration

**Author/Originator:**

Keith Beery and N. Buktenica

**Address from which available:**

Follett Publishing Co.  
1010 W. Washington Blvd.  
Chicago, Illinois 60607

**Purpose of Test:**

To assess the degree to which visual perception and motor behavior are integrated.

**Description of Test:**

This test consists of a series of twenty-four geometric shapes of increasing difficulty which the child is asked to copy without erasures or corrections.

**Age Range:**

Long form - 2 to 15 years; short form - 2 to 8 years.

**Administration:**

Individually administered by a teacher or psychological examiner about 10-15 minutes. Little training is required.

**Scoring:**

A child's reproduction is scored according to the criteria in the manual. Raw scores and age equivalent scores are used.

**Norms:**

Developmental norms for each figure as well as entire test are available.

**Reliability:**

None available.

**Validity:**

Scores on test correlate in high 80's with chronological age and in the low 90's with mental age.

**References:**

Beery, K. E. *Developmental Test of Visual-Motor Integration. Manual* Chicago: Follet, 1967.

See Buros' yearbooks for reviews and references.

**Name of Instrument:**

Carrow Elicited Language Inventory

**Author/Originator:**

Elizabeth Carrow

**Address From Which Available:**

Learning Concepts, Inc.  
2501 N. Lamar  
Austin, Texas 78705

**Purpose Of Test:**

To measure a child's productive control of grammar.

**Description of Test:**

This diagnostic procedure for obtaining performance data on a child's grammatical system consists of 52 stimuli sentences ranging from two to ten words in length and covering 12 grammatical categories and five error types; in addition, it allows a speech pathologist to determine specific linguistic structures contributing to inadequate language performance.

**Age Range:**

3 to 8 years

**Administration:**

Individually administered by a speech pathologist or trained examiner knowledgeable in psycho-linguistics and language disorders. Takes approximately 45 minutes to administer, transcribe and score.

**Scoring:**

Examiner scores the child on the basis of a tape recording of his/her test responses. Each type of error is totalled and all subgroup errors are totalled and compared to norm tables. A summary of resultant scores, stanines and percentile rankings is reported.



**Norms:**

Norms are available for 475 white, middleclass children, aged 3 to 8 years, in Houston, Texas.

**Reliability:**

Test-retest reliability over a 2 week period was .98 for 25 children. Inter-examiner reliability for two administrators scoring 10 randomly selected tapes was .98.

**Validity:**

Analysis of variance testing age differences in total and subscores was significant; the correlation between age and total error was .62.

**Reference:**

Carrow, E. *Manual for the Carrow Elicited Language Inventory*. Austin, Texas: Learning Concepts, 1974.

**Name of Instrument:**

Children's Apperception Test

**Author/Originator:**

Leopold Bellak and Sonya S. Bellak

**Address From Which Available:**

Western Psychological Services  
12031 Wilshire Boulevard  
Los Angeles, California 90025

**Puurpose of Test:**

To measure personality adjustment and dynamics.

**Description of Test:**

The test consists of ten black and white stimulus cards either of animal or human pictures. For each stimulus picture the child invents a story telling what is happening, what led up to the scene, and what the outcome will be.

**Age Range:**

3 to 10 years

**Administration:**

Individually administered and scored by a trained clinician; takes approximately 15 to 20 minutes.

**Scoring:**

A child's responses to each story are most frequently scored onto the Bellak checklist of eleven variables, such as main theme, identification and significant conflicts. For a detailed description of the scoring system and case studies, see Bellak (1954) and Bellak and Adelman (1960).

**Norms:**

There are two published normative studies using the CAT with preschool and kindergarten children. The main CAT responses for 80 children, ages 2 years, 8 months to 6 years, 5 months, are reported by Byrd and

Witherspoon (1954) and scores, for 160 kindergarten children, ages 5 years, 6 months to 6 years, 4 months, are reported by Lehman (1959). Several normative studies for children in the latency period are described by Haworth (1966).

### **Reliability:**

Haworth (1966) summarizes the few available studies on reliability of the CAT with young children. The available test-retest coefficients reported for varying time periods of two weeks to six months are generally low. However, as Haworth points out, low estimates are expected, since changes in a child's normal development are anticipated over time. Reliability figures for repeat scorings by the same judge were high (.90s) in four studies cited. Interscorer reliability coefficients between two or more judges in the ten studies cited were generally satisfactory, with lower correlations found for the less objective and specific scoring categories.

### **Validity:**

A thorough description of all the studies using the CAT up to 1965-1966 is available in Haworth's book (1966). In general, the studies have shown the CAT can be used to differentiate between normal children and special groups, such as schizophrenic, emotionally disturbed, and cerebral palsied children. Few sex differences in responses to the CAT have been noted.

### **References:**

- Bellak, L. *The Thematic Apperception Test and the Children's Apperception Test in Clinical Use*. New York: Grune and Stratton, 1954.
- Bellak, L., & Adelman, C. The Children's Apperception Test (CAT). In R.A. Babin and M.R. Haworth (Eds.), *Projective Techniques with Children*. New York: Grune and Stratton, 1960.
- Byrd, E., & Witherspoon, R.L. Responses of preschool children to the Children's Apperception Test. *Child Development*, 1954, 25, 35-44.
- Haworth, M.R. *The CAT: Facts About Fantasy*. New York: Grune and Stratton, 1966.
- Lehman, I.J. Responses of kindergarten children to the Children's Apperception Test. *Journal of Clinical Psychology*, 1959, 15, 60-63.
- See Buros (1972) and Walker (1973).

**Name of Instrument:**

Frostig Developmental Test of Visual Perception

**Author/Originator:**

Marianne Frostig, Welty LeFever, and John Whittlesey

**Address From Which Available:**

Consulting Psychologists Press  
577 College Avenue  
Palo Alto, CA 94306

**Purpose of Test:**

To measure visual perception and visual motor skills.

**Description of Test:**

The child is asked to perform paper and pencil tasks of various types in order to assess five areas of perceptual skills: eye-hand coordination, figure-ground discrimination, form constancy, positioning in space, and spatial relationships.

**Age Range:**

3 to 9 years.

**Administration:**

Individually and/or group administered by an examiner familiar with the procedure. Takes 30-40 minutes for an individual administration followed by 5-10 minutes for scoring.

**Scoring:**

A child's response is given 0 to 4 points as specified in the manual. All subtests are totalled for raw scores, which are converted to age equivalents and scaled scores from which a perceptual quotient is calculated.



**Norms:**

Norms are available for 2100 children, aged 3 to 9 years, in southern California; most children in norms are white from middleclass families.

**Reliability:**

Test-retest reliability after several weeks is in high 90's.

**Validity:**

In various studies, children with perceptual quotients below 90 were found to have a great deal of difficulty when learning to read.

**Reference:**

Frostig, M., LeFever, W. & Whittlesey, J. *Manual for the Developmental Test of Visual Perception*. Palo Alto, California: Consulting Psychologists, 1966.

**Name of Instrument:**

Gesell Developmental Schedules

**Author/Originator:**

Arnold Gesell and Associates

**Address From Which Available:**

Psychological Corp.  
304 East 45th St.  
New York, N.Y. 10017

**Purpose of Test:**

To assess a child's overall behavior and developmental level.

**Description of Test:**

Schedules consist of items to tap four major areas of behavior: motor characteristics (postural reactions, prehension locomotion, general bodily coordination, specific motor skills), adaptive (perceptual, orientational, manual and verbal adjustments, alertness, intelligence, constructive-ness), language (soliloquy, dramatic expression, communication, comprehension), and personal-social (personal reactions to others, adjustments to domestic life, social groups).

**Age Range:**

4 weeks to 6 years

**Administration:**

Administered individually by trained personnel. Takes about 20-30 minutes.

**Scoring:**

Schedules are scored in developmental ages, as contrasted with a child's chronological age.

**Norms:**

Developmental norms on a small select sample of children available.

**Reliability:**

None available for children, aged 3-5 years.

**Validity:**

Little evidence of the instrument's validity has been found.

**Reference:**

Gesell, A. & Amatruda, C.S. *Developmental Diagnosis*. 3rd edition. New York; Harper, 1974.

Gesell, A., et. al. *The First Five Years of Life: A guide to the study of the Preschool child*. New York: Harper, 1940.

See Buros' yearbooks for reviews and references.

**Name of Instrument:**

Goldman-Fristoe Test of Articulation

**Authors/Originators:**

Ronald Goldman and Macalyne Fristoe

**Address From Which Available:**

American Guidance Service, Inc.  
Publishers Building  
Circle Pines, MN 55014

**Purpose of Test:**

To assess a child's articulation of consonant sounds.

**Description of Test:**

Child is asked to identify 36 pictures, retell stories with the aid of pictures, and repeat sounds in syllables, words and sentences. There are three subtests. The Sound-in-Words Subtest utilizes 36 pictures of familiar objects; the examiner records the child's articulation of speech sounds. The Sounds-in-Sentences Subtest consists of two stories read aloud by the examiner and illustrate by sets of pictures. In order to approximate speech production of ordinary conversational speech, the child is asked to recount each story in his own words using the pictures as memory aids. The Stimulability Subtest asks the child to pronounce a previously misarticulated phoneme, given both visual and oral stimulation.

**Age Range:**

2 years and older.

**Administration:**

Individually administered by a person familiar with test and knowledgeable about phonetic notation.



**Scoring:**

Each item may be scored for frequency of errors and for type of errors. Subtest and total scores are determined and converted to percentile ranks.

**Norms:**

No norms for young children are available.

**Reliability:**

Test-retest reliability with 37 articulatory-defective children was in .90's for frequency of errors and in high .80's for types of errors. Interrater reliability was .92 for presence of error and .88 for type of error.

**Validity:**

None available.

**References:**

Goldman, R., & Fristoe, M. *Manual for the Goldman-Fristoe Test of Articulation*. Circle Pines, Minn.: American Guidance Service, 1972.

See Buross' yearbooks for reviews and references.

**Name of Instrument:**

Goldman-Fristoe-Woodcock Test of Auditory Discrimination

**Authors/Originators:**

Ronald Goldman, Macalyne Fristoe, and Richard Woodcock

**Address From Which Available:**

American Guidance Service  
Publishers Building  
Circle Pines, Minn. 55014

**Purpose Of Test:**

To assess speech-sound discrimination under both quiet and distracting noise conditions.

**Description Of Test:**

This test uses a tape-recorded stimulus and pictures which the child is to select. There are three parts to the instrument: a training procedure, a quiet subtest, and a noise subtest. Each of the two subtests include six words from each of the categories: voiced plosives, unvoiced plosives, voiced continuants, nasals, and unvoiced continuants.

**Age:**

4 years and older

**Administration:**

Individually administered by an experienced examiner familiar with the Manual in 10-15 minutes.

**Scoring:**

Child is given one point for each correct identification. All correct responses are totalled for each subtest and may be converted to percentile ranks.

**Norms:**

Norms available for 745 persons, aged 3 to 84 years.

**Reliability:**

Test-retest reliability for 17 preschool speech-disabled children was .87 for the quiet condition and .81 for the noisy condition.

**Validity:**

None available for young children.

**Reference:**

Goldman, R., Fristoe, M., & Woodstock, R.W. *Manual for the Goldman-Fristoe-Woodstock Test of Auditory Discrimination*. Circle Pines, Minn.: American Guidance Service, 1970.

**Name of Instrument:**

Goodenough-Harris Drawing Test

**Author/Originator:**

Florence L. Goodenough and Dale B. Harris

**Address From Which Available:**

Harcourt, Brace & Javanovich, Inc.  
Test Department  
757 3rd Avenue  
New York, N.Y. 10017

**Purpose:**

To measure mental ability via a nonverbal mode.

**Description Of Test:**

The child is asked to draw a man, a woman, and him/herself.

**Age.**

3 to 15 years.

**Administration:**

Individually administered by trained personnel. Takes about 15-20 minutes.

**Scoring:**

A trained clinician scores drawings on the basis of presence or absence of certain characteristics. Users are cautioned against using this test to make diagnosis of mental impairment, since it is heavily affected by personality variables. It is most useful as a projective tool for clinical assessment.



**Norms:**

Available for ages three to fifteen, separately/or boys and girls, in the form of standard scores and percentile ranks.

**Reliability:**

In general, interrater reliability of judges varies depending on the experience and training of the judge and the type of scoring unit used.

**Validity:**

Few solid studies of preschool age exist. Consistent evidence for the instrument's validity has not been found.

**References:**

Harris, D.B. *Children's drawing as measures of intellectual maturity: A revision and extension of the Goodenough Draw-A-Man Test*. New York: Harcourt, Brace & World, 1963.

See Buros' yearbook for reviews and references.

**Name of Instrument:**

Illinois Test of Psycholinguistic Abilities.

**Author/Originator:**

Samuel A. Kirk, James J. McCarthy, and Winifred D. Kirk

**Address From Which Available:**

University of Illinois Press  
University of Illinois  
Urbana, Illinois 61801

**Purpose Of Test:**

To assess psycholinguistic abilities and to identify learning disabilities.

**Description Of Test:**

This diagnostic test battery consists of 12 subtests which provide information in the following areas: auditory reception, visual reception, visual sequential memory, auditory association, auditory sequential memory, visual association, visual closure, verbal expression, grammatic closure, manual expression, auditory closure (optional), and sound blending (optional). These 12 aspects, ranging from auditory and visual reception to visual-sequential memory and sound blending, have been conceptualized in terms of three dimensions. First, children's auditory-vocal and visual-motor behaviors comprise abilities labeled "channels of communication." Receptive, organizing, use, and expressive processes comprise the second major dimension, "the psycholinguistic process." The third dimension consists of two levels instead of processes, "the automatic and the representational." Assessment by way of the ITPA leads to the charting of individual profiles, or underlining intra-individual differences, in terms of these dimensions.

**Age Range:**

2 - 10 years

**Administration:**

Individually administered by a highly trained examiner. Takes about one to one and a half hours to administer.

**Scoring:**

Each subtest is scored according to the manual. From the 12 subtest scores a total language age and a diagnostic profile may be obtained. Emphasis is placed on individual profiles and indicators of learning disabilities.

**Norms:**

Norms are available for white, middle class children, aged 2 to 10 years.

**Reliability:**

Overall test reliability is adequate.

**Validity:**

Even though there are studies using this test, little validity data for young children is available.

**References:**

Bateman, B. *The Illinois Test of Psycholinguistic Abilities in current research: Summary of studies*. Urbana, Illinois: University of Illinois Press, 1965.

Kirk, S.A., McCarthy, J., & Kirk, W. *Examiner's Manual: Illinois Test of Psycholinguistic Abilities*. Rev. Ed., Urbana, Illinois: University of Illinois, 1968.

Parashevopoulos, J.N., & Kirk, S.A. *The development and psychometric characteristics of the revised Illinois Test of Psycholinguistic Abilities*. Urbana, Illinois: University of Illinois, 1969.

See Buros' yearbooks for reviews and references.

**Name of Instrument:**

Learning Accomplishment Profile

**Author/Originator:**

A. R. Sanford

**Address From Which Available:**

Kaplan School Supply  
600 Jonestown Road  
Winston-Salem, N. C. 270103

**Purpose Of Test:**

To provide an overview of a child's skills, abilities, and behavior.

**Description Of Test:**

For the first section, tasks were taken from many developmental scales and are arranged hierarchically, with developmental ages from the scale from which the item was taken indicated. Areas covered are: gross motor, fine motor, social skills, self-help, cognitive, and language development. For each task there is a column in which to indicate the entry test date, the date the test was achieved, and comments. The Profile's second section is geared to more specific instructional objectives. The teacher can indicate attainment of specific criterion levels for numerous skills in the areas of writing, self-help, and cognitive development (including communication skills).

**Age Range:**

1 month to 6 years.

**Administration:**

Individually or group administered by a person familiar with the procedure during the course of program day rather than during a formal test situation. Administrator can be a paraprofessional. There is no specific time period; the process usually takes one week to one month to complete within the classroom setting. The profile is to be accomplished in three steps: (1) compiling developmental data, (2) task analysis of a skill, and (3) curricular development.



**Scoring:**

Each item is scored either pass or fail with comments on how the child performed the item. A profile of development is plotted for each area assessed. The Learning Accomplishment Profile is cross-referenced to the *Planning Guide for Preschool Curriculum* which provides teaching strategies to encourage skill development.

**Norms:**

None available.

**Reliability:**

None available.

**Validity:**

None available.

**Reference:**

Sanford, A *A Manual for Use of the Learning Accomplishment Profile*. Winston-Salem, N. C.: Kaplan School Supply, 1974.

**Name of Instrument:**

McCarthy Scales of Children's Abilities

**Author/Originator:**

Dorothea McCarthy

**Address From Which Available:**

Psychological Corporation  
304 East 45th Street  
New York, New York 10017

**Purpose Of Test:**

To assess a child's intellectual and motor development.

**Description of Test:**

18 tasks assess six aspects of a child's thinking, memory, and motor abilities. The six scales with corresponding number of tasks in each are as follows: verbal (5), perceptual-performance (7), quantitative (3), general cognitive (15), memory (4), and motor (5).

**Age Range:**

2½ - 8½ years.

**Administration:**

Individual by a trained tester; approximately 45 minutes to one hour per child; need kit of materials.

**Scoring:**

Score each item according to manual: raw scores are converted to scale scores according to a child's chronological age.

**Norms:**

Age-normed (10 groups) on a census-representative sample controlled by age, sex, race, geographic region, and father's occupation.

**Reliability:**

Reliability coefficients for scale scores range from .79 for motor and for memory to .93 for general competence.

**Validity:**

Little information presently available since test is fairly new on market; in one study (n-35), the General Cognitive Index correlated .71 with full scale WPPSI score and .81 with Stanford-Binet IQ. Correlated in .40's with Metropolitan Achievement Tests.

**References:**

McCarthy, D. *Manual for McCarthy Scales of Children's Abilities*. New York: Psychological Corp., 1972.

**Name of Instrument:**

Peabody Picture Vocabulary Test

**Author/Originator:**

Lloyd M. Dunn

**Address From Which Available:**

American Guidance Service, Inc.  
Publishers Building  
Circle Pines, Minnesota 55014

**Purpose Of Test:**

To measure a child's verbal intelligence by measuring his receptive vocabulary — the number of words the child knows on hearing them.

**Description Of Test:**

The PPVT is an untimed individual test consisting of a booklet with three practice items and 150 test plates each with four numbered pictures. For each item the stimulus word (a noun or verb form) is presented orally and the child is required to indicate the picture corresponding to the word, either by pointing or by giving the number of the appropriate picture. Items increase in difficulty and are presented to a child until six errors are made out of eight consecutive responses or the test is completed.

**Scoring:**

Each item was scored as correct, incorrect, child refused or indeterminate. This is a "tailored test," meaning that there is not a fixed number of items given to each child. The test is also Guttman-scaled; in other words, it is assumed a child will get all items correct below any specific item on the test. The raw score or number of correct responses, can be converted into a mental age, intelligence quotient, and percentile score.

**Norms:**

The original PPVT standardization sample was based entirely on 4,012 white children in and around Nashville, Tennessee. Children ranging in number from 92 to 354 and representing 19 different age levels from 2.5 to 18 years were included. Norms of the ETS Head Start Longitudinal samples are available for children Year 1 (in three months age intervals from 42-59 months) and for children in Year 2 (in three month age intervals from 51-69 months). (Shipman, 1972). Norms for raw scores are available (Walker et. al., 1973) for children of 15 three month age intervals from 36-38 months to 78-80 months.



**Reliability:**

In general the reliability estimates for the PPVT are quite good (Walker et al., 1973). Dunn (1965) reports that the parallel forms reliability estimate with children between three and six is about .72.

**Validity:**

Congruent or concurrent validity estimates include comparisons with intelligence, language and achievement tests. Predictive validity estimates include comparisons with future school success. In general, there are many more concurrent validity estimates available for the PPVT; most of these are correlations with intelligence measures (Walker et al., 1972). Dunn (1965) reports that Peabody Picture Vocabulary Test scores correlate .83 with Stanford-Binet scores and .64 with Wechsler Preschool and Primary Scale scores. Even though scores are highly correlated with Stanford-Binet scores, the Peabody Picture Vocabulary scores found in these studies have been consistently lower than those of the Stanford-Binet. Thus, Walker et al. (1972) conclude that the test should only be used as a measure of receptive vocabulary, and not intelligence, at this time.

**References:**

Dunn, L. M. *Expanded manual for Peabody Picture Vocabulary Test*. Circle Pines, Minnesota: American Guidance Service, 1965.

Shipman, V.C. (Ed.) *Disadvantaged children and their first school experiences: Technical report series*. Prepared for the Office of Child Development, DHEW. Princeton, N.J.: Educational Testing Service, 1972.

Walker, D.K., Bane, M.J., and Bryk, A.S. *The quality of the Head Start Planned Variation data*. 2 volumes. Prepared for the Office of Child Development, DHEW. Cambridge, Mass.: Huron Institute, 1973.

See Buros' yearbooks for reviews and references.

**Name of Instrument:**

Portage Guide to Early Education

**Author/Originator:**

Susan M. Bluma, Marsha S. Shearer, Alma H. Frohman, and  
Jean M. Hilliard

**Address From Which Available:**

Portage Project  
Box 564  
Portage, Wisconsin 53901

**Purpose Of Test:**

To provide an overview of a child's skills, abilities, and  
behavior.

**Description Of Test:**

This criterion-referenced checklist contains 580 developmentally sequenced behaviors. The guide is comprised of three parts: a checklist, a manual, and cards to be used in teaching behaviors included in the checklist. The checklist is to be used as an assessment tool to pinpoint existing skills in the child's repertoire, as well as behavior the child has yet to learn. The checklist also provides a method of maintaining an ongoing record of the child's progress. Each subarea of the checklist (infant stimulation, socialization, self help, language, cognition, motor) is color coded and items are numbered for easy cross-reference to the curriculum cards. Each item appears only in one area.

**Age Range:**

Birth to 6 years

**Administration:**

Individually or group administered by a person familiar with the checklist. Administrator can be a teacher, aide, parent, or other member of a service profession.

**Scoring:**

Each item accomplished by a child is checked. No quantitative score or developmental age is assigned. Checklist may be used until all items are successfully accomplished.

**Norms:**

None available.

**Reliability:**

None available.

**Validity:**

None available.

**Reference:**

Bluma, S.M., Shearer, M.S., Frohman, A.H., & Hilliard, J.M. *Manual for the Portage Guide to Early Education*. Portage, Wisconsin: Portage Project, 1976.

**Name of Instrument:**

Preschool Attainment Record

**Author/Originator:**

Edgar A. Doll

**Address From Which Available:**

American Guidance Service  
Publisher's Building  
Circles Pines, Minnesota 55014

**Purpose Of Test:**

To measure a child's physical, social, and intellectual development.

**Description Of Test:**

This rating scale and checklist includes eight categories of development: ambulation, manipulation, rapport, communication, responsibility, information, ideation, and creativity. For each category there is one item per six-month age interval. Item types and arrangement are the same as those of the Vineland Social Maturity Scale.

**Age Range:**

6 months to 7 years.

**Administration:**

An experienced interviewer uses the standardized interview format to obtain information from a person familiar with the child being assessed. Takes approximately 20-30 minutes.

**Scoring:**

All items successfully passed in all categories are counted to attain a raw score from which an Attainment Age and Attainment Quotient are calculated. Summary and profile sheet show items by age period as well as by category.

**Norms:**

None available.

**Reliability:**

Mothers' and teachers' ratings made within a one-week period, have been compared in several studies. In a study with 17 five-year-old children (8 boys and 9 girls) by Stedman and others (1969) and in a study with 20 four-year-old children (10 boys and 10 girls) by Blair (1970), mothers rated the boys significantly higher than did the teachers, while there was no significant difference in ratings for girls. In a further study by Lederman and Blair (1972), the mean for mothers' ratings of 28 five-year-olds were significantly higher than the mean for teachers' ratings.



**Validity:**

In a study with 20 four-year olds and 28 five-year olds (Lederman and Blair, 1972), both teachers' and mothers' ratings were higher for the older children. The point-biserial correlation between age and ratings was .78 for teachers and .91 for mothers. Correlations between Metropolitan Readiness Test scores, given one year after the PAR assessment was made, and PAR ratings of teachers and mothers were .69 and .46 respectively (Lederman and Blair, 1972). When these correlations were controlled for a child's age category, they reduced to .62 for teachers and .24 for mothers.

**References:**

- Blair, J. A comparison of mother and teacher ratings on the Preschool Attainment Record of four year old children. *Exceptional Children*, 1970, 37, 299-300.
- Lederman, E., & Blair, J.R. Comparison of the level and predictive validity of Preschool Attainment Record ratings obtained from teachers and mothers. *Psychology in the Schools*, 1972, 392-395.
- Stedman, D.J., Clifford, M., & Spitznagel, A. A comparison of ratings by mothers and teachers on the Preschool Attainment Record of 17 five year old children. Abstract, *Exceptional Children*, 1969, 35, 488-489.
- See Walker (1973).

**Name of Instrument:**

Stanford-Binet Intelligence Test — Form L-M

**Author/Originator:**

Terman and Merrill revision of 1937 Binet scale

**Address From Which Available:**

Houghton-Mifflin Company  
111 Tremont Street  
Boston, Massachusetts 02107

**Purpose Of Test:**

To assess a child's intelligence.

**Description Of Test:**

Test consists of subtests graduated in difficulty according to age. Early subtests contain more non-verbal tasks such as block building and stringing beads, while later subtests contain more verbal tasks such as vocabulary, analogies and number problems.

**Age Range:**

2½ - adult.

**Administration:**

Individual testing with trained testers; approximately 30-90 minutes; need kit of materials.

**Scoring:**

Instructions for each test in the manual; Child's mental age, as determined by the test items, and chronological age are converted into an intelligence quotient (IQ).

**Norms:**

Norms available for white and minority populations from 1972 standardization sample; previously norms were only for white sample.

**Reliability:**

Reliability coefficients for ages 6-13 range from .91 (IQs 140-149) to .97 (IQs 60-69).

**Validity:**

Correlates highly with other intelligence tests in studies. Validity based on traditional and cultural acceptance of "intelligence" as defined by what the intelligence test measures, which is questioned by some educators today. Questionable use with non-white populations. Concurrent and predictive validity established with correlations with academic achievement tests (.40-.75).

**References:**

Terman, L.M., & Merrill, M.A. *Stanford-Binet Intelligence Scale: Manual for the Third Revision — Form LM*. Boston: Houghton-Mifflin, 1960.

See Buros' yearbooks for reviews and references.

**Name Of Instrument:**

Thematic Apperception Test

**Author/Originator:**

Henry A. Murray and Leopold Bellak

**Address From Which Available:**

For Bellak scoring blank  
Psychological Corporation  
304 East 45th Street  
New York, New York 10017

For original version:  
Harvard University Press  
79 Garden Street  
Cambridge, Massachusetts 02138

**Purpose Of Test:**

To assess personality characteristics from cognitive and affective frames of reference.

**Description Of Test:**

This individually-administered projective test consists of 20 picture cards to which a child responds by creating a story to go with the picture.

**Age Range:**

Ages 4 and up.

**Administration:**

Administered individually by a trained clinician who records responses; 10 cards are presented during each of two one-hour sessions.

**Scoring:**

A trained clinician identifies the "hero" of each story and analyzes the content in terms of the needs and environmental pressures expressed. Intensity, duration and frequency of responses are important. The most commonly used scoring system and recording sheet was developed by Leopold Bellak.



**Norms:**

A good amount of normative data has been published regarding the most frequent response characteristics for each card (see Atkinson, 1958, or Henry, 1956). However, "subjective norms" developed through personal clinical experience are most important in interpretation.

**Reliability:**

Scoring reliability ranges from .54 to .91 in numerous studies. Test-retest and internal consistency reliability are low.

**Validity:**

Mainly useful for clinical insights and some research purposes. Poor validity found when compared with overt acts and other projective measures.

**References:**

Atkinson, J.W. *Motives in fantasy, action, and society*. Princeton, N.J.: Van Nostrand, 1958.

Henry, W.E. *The analysis of fantasy: The Thematic Apperception Technique in the study of personality*. New York: Wiley, 1956.

See Buros (1972) and Walker (1973).

**Name Of Instrument:**

Vineland Social Maturity Scale

**Author/Originator:**

Edgar A. Doll

**Address From Which Available:**

American Guidance Service  
Publisher's Building  
Circle Pines, Minnesota 55014

**Purpose Of Test:**

To measure social maturity, competence, and independence in people from birth to maturity.

**Description Of Test:**

This individually-administered and untimed developmental rating scale uses an interview format based on a developmental scale of 72 items that increase in difficulty with age levels in six broad categories: self-help, self-direction, locomotion, occupation, communication, and socialization. It is generally used to assess the social skills of children with special needs.

**Age Range:**

Birth to maturity

**Administration:**

An experienced interviewer uses the standardized interview form to obtain information from a person familiar with the child being assessed. This can be accomplished in 20-30 minutes.

**Scoring:**

The total score is converted to a social age (or social quotient) to be compared with chronological age.

**Norms:**

Age norms of Vineland social quotients are available for the original standardization sample of 620 persons (10 males and 10 females, at each age level from zero to thirty years) in Vineland, New Jersey, in 1936 (Dill, 1936).

**Reliability:**

Test-retest reliability coefficients "across conditions" was .92 for standardization sample. Hoepfner et al. (197 ) rate overall reliability as "poor".

**Validity:**

Kingman (1956) and Pedrini and Pedrini (1966) indicate that the scale has more validity below age 15, especially with preschool children. However, Hoepfner et al. (1971) report no concurrent or predictive validity have been established.

**References:**

Doll, E.A. *The measurement of social competence: A manual for the Vineland Social Maturity Scale*. Circle Pines, Minnesota: American Guidance Service, 1953.

Doll, E.A. Preliminary standardization of the Vineland Social Maturity Scale. *American Journal of Orthopsychiatry*, 1935, 6, 283-293.

Doll, E.A. *The Vineland Social Maturity, Training School*

**Name Of Test:**

Wechsler Intelligence Scale for Children (WISC)  
Wechsler Preschool and Primary Scale for Children (WPPSI)

**Author/Originator:**

David Wechsler

**Address From Which Available:**

Psychological Corp.  
304 E. 45th St.  
New York, N.Y. 10017

**Purpose Of Test:**

To assess general intelligence.

**Description Of Test:**

The test has subtests in two subgroupings: Verbal Scales (General Information, General Comprehension, Arithmetic, Similarities, Vocabulary and Digit Span) and Performance Scales (Picture Completion, Picture Arrangement, Block Design, Object Assembly, Coding or Mazes). A Spanish version of the test does exist.

**Age Range:**

WISC for 5-15 years; WPPSI for 4 years to 6 years-6 months.

**Administration:**

Individual testing with trained psychological examiner. Takes 40-60 minutes.

**Scoring:**

Items are scored according to the manual. Raw scores are converted in to Verbal, Performance, and Full Scale IQs.



**Norms:**

Standardized norms are available for age levels, controlled for sex, race, father's occupation, geographic region, and urban/rural. Also Spanish-speaking norms are available for a sample from San Juan, Santurce and Cantano.

**Reliability:**

Reported reliabilities are in high .80's and .90's for scale scores.

**Validity:**

Correlations with the Stanford-Binet test are in the .80's for most studies using both measures. Validity is based on the culturally-accepted traditional notion of intelligence being defined as "what the intelligence test measures," this notion has been questioned recently by many educators.

**References:**

Wechsler, D. **Wechsler Intelligence Scale for Children**. New York: Psychological Corp., 1965.

Wechsler, D. *Wechsler Preschool and Primary Scale of Intelligence*. New York: Psychological Corp., 1967.

See Buros' yearbooks for reviews and references.

# Appendix C

## Examples Of Forms Used For Referrals

### Sample 1

**To be filled out before referral by the school district**

Name of child \_\_\_\_\_ Age \_\_\_\_\_

Referred by: Name \_\_\_\_\_

Position \_\_\_\_\_

Agency \_\_\_\_\_

#### **School and District**

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Contact Person \_\_\_\_\_

Position \_\_\_\_\_

**Reason for Referral** *(include here specific screening results)*

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*\*\*\*\*

Name of Diagnostician \_\_\_\_\_

Position \_\_\_\_\_

Agency Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Discipline \_\_\_\_\_

## Functional Assessment

1) Please describe instruments used in diagnosing the child. Were any special considerations given because of socioeconomic or cultural factors in this case?

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---

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2) Please describe problems and needs which this child has. What areas should receive remediation?

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3) Please describe strengths which this child has that might be used to aid remediation efforts.

---

---

---

4) Please list any suggestions which you feel would aid in developing an individualized curriculum for this child. Do you recommend any home follow-up activities for parents?

---

---

---

5) Do you recommend special services for this child?

Yes\_\_\_\_\_

No\_\_\_\_\_

If yes, what special services are recommended? (Please check and elaborate below if necessary.)

\_\_\_\_\_Special Education Specify Program:\_\_\_\_\_ )

\_\_\_\_\_Language Development

\_\_\_\_\_Speech

\_\_\_\_\_Counseling

\_\_\_\_\_Visual

\_\_\_\_\_Psychiatric Therapy

\_\_\_\_\_Auditory

\_\_\_\_\_Family Counseling

\_\_\_\_\_Physical Therapy

\_\_\_\_\_Medical Services

(Please specify: \_\_\_\_\_

\_\_\_\_\_

6) Do you recommend special training for the teacher serving this child?

Yes\_\_\_\_\_ No\_\_\_\_\_

If yes, please state what form of training should be provided for the teacher of this youngster.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Signed\_\_\_\_\_  
Date\_\_\_\_\_

Adapted from a Head Start Diagnostic Reporting Form developed by Chapel Hill Training-Outreach Project, Chapel Hill, North Carolina.



## Sample 2

### Attention Diagnostic Provider

In order that this child might qualify for special funding to finance these services, it is necessary that you supply the following information.

This information will be held confidential and will be used to enhance this child's development. Please be as specific as you can.

Appointment Date\_\_\_\_\_

Name of Child: \_\_\_\_\_Age\_\_\_\_\_D.O.B.\_\_\_\_\_

Referred by: Name \_\_\_\_\_

Position\_\_\_\_\_

Agency \_\_\_\_\_

#### School Referring Child

Name \_\_\_\_\_

Address \_\_\_\_\_

Contact person \_\_\_\_\_

#### Reason for Referral

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(School fills in the above prior to referral.)

Name of Diagnostician: \_\_\_\_\_

Position: \_\_\_\_\_

Agency Name: \_\_\_\_\_

Address: \_\_\_\_\_

Discipline: \_\_\_\_\_

(Note — Diagnostician fills in this section.)

The following sections are to be filled out by the diagnostic provider.

1) **Functional Assessment** — Please list the specific strengths and weaknesses of this child which you have observed during the diagnostic process. Please make them specific enough to be incorporated in an effective individual program of supporting and educational services for this child.

Strengths	Weaknesses

2) Please list the instruments and/or procedures that you utilized in making this diagnosis:


3) Do you recommend special services for this child?

Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, please specify what special services will benefit this child.


Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Adapted from a Head Start Diagnostic Reporting Form developed by Greg Bryant and Local Handicap Coordinators from Cluster "C" North Carolina.

# Appendix D

## Worksheets For Evaluating Screening And Assessment Instruments For Young Children

Name of Instrument \_\_\_\_\_

Author/Developer \_\_\_\_\_

Address Where Measure is Obtained

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Directions:

Answer the following with respect to the instrument listed above.

Check all responses that apply or follow other directions.

(Note: NA means no information was available to judge.)

### I. Purpose:

1. What is the stated purpose of the instrument (e.g., screening, diagnosis, verification, etc.)?

\_\_\_\_\_

2. What areas/domains of behavior/development are being assessed (e.g., cognitive, language, social, emotional, motor, etc.)?

\_\_\_\_\_

\_\_\_\_\_

3. Is a parent-report component included?

\_\_\_\_\_Yes      \_\_\_\_\_No

## II. Appropriateness For Target Population:

1. Is the instrument's content appropriate with the respect to the following variables?

- a. Child's developmental level      ☐yes    ☐no    ☐NA
- b. Child's native language      ☐yes    ☐no    ☐NA
- c. Child's oral comprehension      ☐yes    ☐no    ☐NA
- d. Child's vocabulary      ☐yes    ☐no    ☐NA
- e. Child's attention span      ☐yes    ☐no    ☐NA
- f. Child's special need(s)      ☐yes    ☐no    ☐NA

2. Is the instrument's content biased with respect to the following?

- a. Race      ☐yes    ☐no    ☐NA
- b. Culture      ☐yes    ☐no    ☐NA
- c. Sex      ☐yes    ☐no    ☐NA
- d. Other (specify)      ☐yes    ☐no    ☐NA

3. Is the test format both appropriate and appealing?

☐yes    ☐no    ☐uncertain    ☐NA

4. Are the instructions for the administration of the measure clear and standardized?

☐yes    ☐no    ☐uncertain    ☐NA

If applicable, are the instructions appropriate for the target population?

☐yes    ☐no    ☐uncertain    ☐NA



5. Is the procedure for recording the child's responses appropriate and adequate?

\_\_\_yes \_\_\_no \_\_\_uncertain \_\_\_NA

### III. Administrative Usability:

1. Is the instrument easy and convenient to administer?

\_\_\_yes \_\_\_no \_\_\_NA

2. How long does the assessment procedure take each time it is used?

\_\_\_\_\_

How many times will the assessments be made during the evaluation?

\_\_\_\_\_

When? \_\_\_\_\_

3. Who should administer the procedure?

\_\_\_\_\_

How much formal training is needed to adequately administer the procedure?

\_\_\_none \_\_\_minimal \_\_\_some \_\_\_a lot \_\_\_NA

4. What is the approximate average cost per student for each time the assessment procedure is used?

\_\_\_\_\_

Overall, the costs associated with using the measure in the evaluation are

\_\_\_Extremely  
high \_\_\_high \_\_\_moderate \_\_\_low \_\_\_NA

**IV . Technical Quality** (*E-excellent; G-good; F-fair; P-poor*):

1. Is the assessment procedure reliable? (Circle the most appropriate rating.)

- |                                     |   |   |   |   |    |
|-------------------------------------|---|---|---|---|----|
| a. Internal consistency estimates   | E | G | F | P | NA |
| b. Stability estimates              | E | G | F | P | NA |
| c. Intertester/interjudge estimates | E | G | F | P | NA |

List eligible reliability coefficients: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Is the assessment procedure valid? (Circle the most appropriate rating.)

- |                                    |   |   |   |   |    |
|------------------------------------|---|---|---|---|----|
| a. Content validity estimates      | E | G | F | P | NA |
| b. Criterion-related validity      | E | G | F | P | NA |
| Concurrent validity                | E | G | F | P | NA |
| Predictive validity                | E | G | F | P | NA |
| c. Constructive validity estimates | E | G | F | P | NA |

List available validity data: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. Are norms for the measure available?

\_\_\_yes \_\_\_no \_\_\_NA

If so, for what age range? \_\_\_\_\_

If so, are the norms adequate?

\_\_\_yes \_\_\_no \_\_\_uncertain \_\_\_NA

4. Is the scoring system adequate?

a. Is the scoring procedure understandable?

\_\_\_yes \_\_\_no \_\_\_uncertain \_\_\_NA

b. Who does the scoring? \_\_\_\_\_

c. How much training is necessary?

\_\_\_\_\_

d. Are interpretations for the scores clear and reasonable?

\_\_\_yes \_\_\_no \_\_\_uncertain \_\_\_NA







